



सत्यमेव जयते

Government of Bombay
Public Works Department

Irrigation Administration Report

State of Bombay

Part I

For the Year 1952-53

BOMBAY

PRINTED AT THE GOVERNMENT CENTRAL PRESS

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Price—Rs. 3 As. 4 or 5s. 0d.

1957

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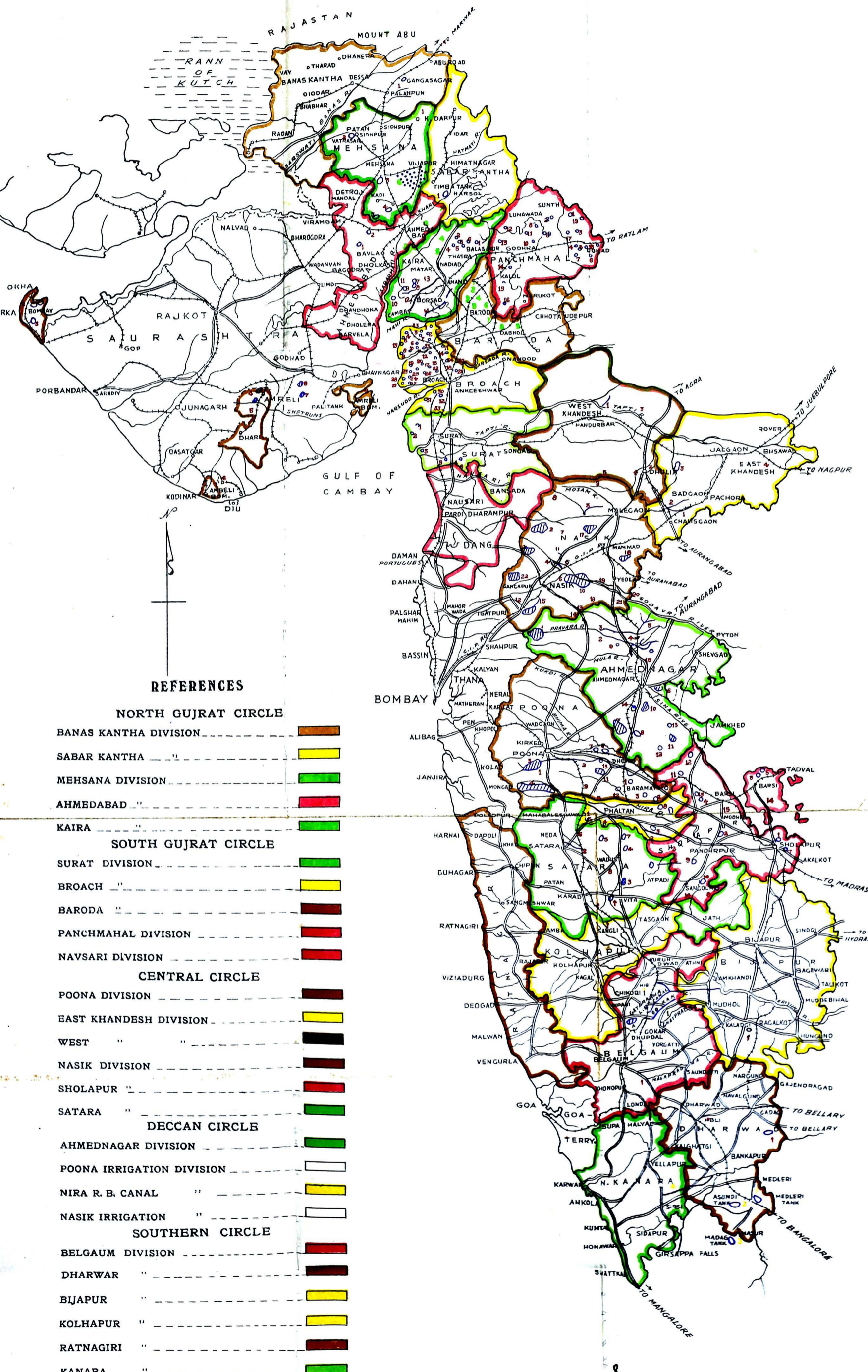
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MAP OF THE STATE OF BOMBAY

TO ACCOMPANY THE IRRIGATION ADMINISTRATION REPORT FOR 1952-53

SCALE 40 MILES TO 1 INCH



REFERENCES

NORTH GUJRAT CIRCLE	
BANAS KANTHA DIVISION	[Color swatch]
SABAR KANTHA	[Color swatch]
MEHSANA DIVISION	[Color swatch]
AHMEDABAD	[Color swatch]
KAIRA	[Color swatch]
SOUTH GUJRAT CIRCLE	
SURAT DIVISION	[Color swatch]
BROACH	[Color swatch]
BARODA	[Color swatch]
PANCHMAHAL DIVISION	[Color swatch]
NAVSARI DIVISION	[Color swatch]
CENTRAL CIRCLE	
POONA DIVISION	[Color swatch]
EAST KHANDESH DIVISION	[Color swatch]
WEST	[Color swatch]
NASIK DIVISION	[Color swatch]
SHOLAPUR	[Color swatch]
SATARA	[Color swatch]
DECCAN CIRCLE	
AHMEDNAGAR DIVISION	[Color swatch]
POONA IRRIGATION DIVISION	[Color swatch]
NIRA R. B. CANAL	[Color swatch]
NASIK IRRIGATION	[Color swatch]
SOUTHERN CIRCLE	
BELGAUM DIVISION	[Color swatch]
DHARWAR	[Color swatch]
BJAPUR	[Color swatch]
KOLHAPUR	[Color swatch]
RATNAGIRI	[Color swatch]
KANARA	[Color swatch]

NOTE
SINCE G. I. C. & K. I. C. OVERLAP OTHER REGULAR CIRCLES' BOUNDARIES OF THEIR DIVISIONS ARE NOT MARKED SEPARATELY

PREPARED BY:-

NORTH GUJRAT CIRCLE	
BANASKANTHA DIVISION	
Works in Operation	
1. Gungawar	MEHSANA DISTRICT
SABARKANTHA DIVISION	
Works in Operation	
MEHSANA DIVISION	
Works in Operation	
1. Uhimnoli Sarover	Thol Tank
2. Anawad Head Work Canal & Vatrast Tank	5. Chandras Tank
3. Ambeli Pipardi Tank	
AMRELI DISTRICT	
1. Nithi Khadi Tank	6. Pichvi Tank
2. Bhangra Tank	7. Dhadli Tank
3. Gombi Tank	8. Kumbh Tank
4. Mota Ambli Tank	9. Badi Patwa Tank
5. Mota Bhandaria Tank	
KAIRA DIVISION	
Works in Operation	
1. Wangroli Tank	8. Nagarna Tank
2. Sarli Tank	9. Patej Tank
3. Saas Tank	10. Kanawal Tank
4. Phodar Tank	11. Halar Drain
5. Banpoda Tank	12. Tangpur Guard Drain
6. Maleral Tank	13. Karamad Drain
7. Trauja Tank	14. Anand Mogri Drain
AHMEDABAD DIVISION	
Works in Operation	
1. Bund at Kuba	2. Bund at Wana-Tawa
Works in Progress	
3. Bund at Tret	
GUJRAT IRRIGATION CIRCLE	
AHMEDABAD IRR. DIVISION	
Works in Operation	
1. Hatmati Cut Canal	4. Goblej Tank
2. Khari Cut Canal	5. Gali Tank
3. Patewadi 8 Months Canal	6. Vajapur Tube Wells Nos. 25
MEHSANA DISTRICT	
Works in Operation	
7. Meshwa Tank	
BARODA IRR. PROJECT DIVN.	
Works in Operation	
8. Sarsi Tank	18. Haripura Tank
9. Marvi Tank	14. Shripur Timbi Tank
10. Javia Tank	15. Wadhvana Tank
11. Karachia Tank	16. Jorva Tank
12. Wadalia Tank	
Works Under Construction	
13. Mahi Canal C. Stage I	17. Manas Tank
	18. Dhadra Tank
SOUTH GUJRAT CIRCLE	
BROACH DIVISION	
Works in Operation	
1. Ubechli-Daba Channel	16. Ora Vichid-Badalpur Channel
2. Nohar-Utra-Kotkar Drainage Channel	17. Bahad Channel
3. Namliana-Nalar Drainage Channel	18. Kaban Iola Drainage Channel
4. Bund at Debel	19. Bund at Aladar
5. Sindhar Drainage Channel	20. Pakli Ambli Channel
6. Kora-Malapher-Jantun Drainage Channel	21. Waghasan Drainage Channel
7. Ananpur-Nadiad Drainage Channel	22. Wansi Channel
8. Bund between Nada & Dava	23. Protective Bund at Hari-Nagar
9. Bund at Nada Village	24. Protective Bund at Kadotra
10. Bund at Isampur	25. Samalpur Drainage Channel
11. Ghanad Drainage Channel	26. Nakhia Ashod Channel
12. Impending Tanks & Subways	27. Bund at Bore
13. Waneta Drainage Channel	28. Tolva Channel
14. Aarav Reclamation Bund	29. Prot. Isth. Bund at Lakhsiga
15. Nimun Channel	30. Asia Channel
16. Protective Bund at Gandhar	31. Hansi Reclamation Bund
	32. Adol Nait Channel
	33. Bartha Diga Channel
Works under Construction	
34. Sarad Kareli Bund	35. Limdi Phakhjan Bhukhi Drain
SURAT DIVISION	
Works in Operation	
1. Morthan Channel	8. Waghej Protective Bund
2. Bund between Kapsa and Kustiana Village	4. Dewada Dam
	5. Bandharpada Wier
Works under Construction	
3. Tipasa Wier	
PANCHMAHAL DIVISION	
Works in Operation	
1. Panna Tank	11. Borda Tank
2. Ward Super Tank	12. Sakhri Tank
3. Saki River Project	13. Bano-hwar Tank
4. Mivaha Tank	14. Kanota Tank
5. Futala Tank	15. Hato Tank
6. Midlao Tank	16. Wada Tank
7. Garoda Tank	17. Nandlao Tank
8. Chikhroli Amli Tank	18. Zarewara Tank
9. Durgana Tank	19. Chaita Chhavan Tank
10. Orwada Tank	
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POONA DIVISION	
Works in Operation	
1. Shirdipal Tank	2. Badladi Tank
Works under Construction	
3. Madladi Tank	4. Madlao Tank
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Works in Operation	
1. Krishna Canal	4. Upper Man River
2. Rewadi Canal	works Pungi Tank
3. Mavani Tank	5. Venala River Works
	Nehar Tank
Works under Construction	
6. Batpa Tank	7. Harnal Tank & Canal
	8. Duraj Tank
SHOLAPUR DIVISION	
Works in Operation	
1. Elruk Tank	6. Mahadwadi Tank & Mira N. B. Canal (From Mile No. 101 To 104)
2. Achi Tank	7. Hing Tank
3. Dathi Tank	8. Ghardi Tank
4. Wadhwa Tank	9. Tolangi Tank
5. Karpasa Tank	
Works under Construction	
10. Javia Tank	14. Vairi Tank
11. Parewadi Tank	15. Bapatia Tank
12. Mangi Tank	16. Chincholi Tank
13. Sangvi Tank	
WEST KHANDESH DIVISION	
Works in Operation	
1. Shubada Canal	2. Lower Panjara River Group
Works under Construction	
3. Karwad Tank	4. Patnada Tank
	5. Bayad Nagar
EAST KHANDESH DIVISION	
Works in Operation	
1. Jamba R. B. Canal	3. Mhaswa Tank
2. Jamba L. B. Canal	4. Valsala Tank
NASIK (R & B) DIVISION	
Works under Construction	
1. Khadi Ozar	
DECCAN IRRIGATION CIRCLE	
NASIK IRRIGATION DIVISION	
Works in Operation	
1. Wadai Tank	12. Kulsina Group
2. Chausagar Tank	13. Darav Group
3. G. R. Canal	14. Darav Group
4. Panchal Canal	15. Darav Group
5. W. R. Canal	16. Darav Group (Laka Haveli)
6. G. R. Canal	17. Khadi Tank
7. Darav Group	18. Khadi Tank
8. Arav Group	19. G. R. Canal (From Mile 0 to 35)
9. M. R. Group	20. G. R. Canal (From Mile 0 to 24)
10. Darav Group	
Works under Construction	
21. G. R. Canal (From Mile 35 to 49)	22. G. R. Canal (From Mile 35 to 49)
GANGAPUR STORAGE DIVISION	
Works under Construction	
23. Gangapur Dam	
AHMEDNAGAR DIVISION	
Works in Operation	
1. W. R. Canal (Laka & Hill)	6. Bhadi Tank
2. Pravas R. B. Canal	7. Vajapur Tank
3. Pravas L. B. Canal	8. Lajapur Tank
4. M. R. Canal	9. Patnada Tank
5. Kanadgaon Tank	10. Works under Construction
11. G. R. Canal	13. G. R. Canal
12. Darav Tank	14. Darav Tank
13. Darav Tank	15. G. R. Canal
14. Darav Tank	
POONA IRRIGATION DIVISION	
Works in Operation	
1. Lake Fite	5. Mira L. B. Canal
2. Mutha R. B. Canal	6. Malda Tank
3. Mutha L. B. Canal	7. Khampur Tank
4. Loydi Dam	8. Bhadli Tank
	9. Baki Tank
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10. Tarawadi Tank	12. Dakhli Tank
11. Warjod Tank	13. Kasardi Tank
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2. Nira L. B. Canal (From Mile 47 to 101)	
Works under Construction	
3. Bhambhani Tank	4. Bhambhani Tank
5. Bhambhani Tank	6. Adardi Tank
SOUTHERN CIRCLE	
BELGAUM DIVISION	
Works in Operation	
1. Gadhli Tank	
DHARWAR DIVISION	
Works in Operation	
1. Damli Tank	
BIJAPUR DIVISION	
Works in Operation	
2. Machkodi Tank	
KOLHAPUR DIVISION	
Works in Operation	
4. Chikhi Tank	
KARNATAK IRRIGATION CIRCLE	
GHATAPRABHA L. B. C. DIVISION	
Works in Operation	
1. Ghataprabha 1st Section and Storage Works	Now merged in G. I. B. C.
2. Ghataprabha L. B. C. From 0 to 44 Miles (From 8 miles in Operation)	
DHARWAR IRRIGATION DIVISION	
Works in Operation	
3. Medleri Tank	6. Madga Canal
4. Asandi Tank	7. Dhanna Canal
Works in Operation	
5. Mavhop Tank	
Note:	
Works in G. I. C. are marked in green, on the map while those of K. I. C. are marked in yellow.	

15/6/1956

**AN IRRIGATION ADMINISTRATION REPORT, BOMBAY
STATE, PART I, FOR 1952-53.**

**PHYSICAL FEATURES—GENERAL DESCRIPTION OF
IRRIGATION.**

The area under irrigation in the Bombay State is not compact. Rainfall is available for agricultural operations but is often precarious. Tanks and canals provide irrigation for valuable crops such as sugarcane and also provide a source of supply to their crops when the rainfall is deficient or irregular. The old irrigation works consist chiefly of a few small canals and moderately large tanks some 12,000 smaller tanks mostly in the southern part of the State and in Gujarat, and of about 400 bandharas in Nasik and Khandesh Districts. The tanks have earthen dams and the larger ones irrigate areas upto 1,300 acres, and the smaller ones upto 500 acres, situated immediately below the dams. The chief crop irrigated is rice. The bandharas are masonry weirs built across rivers to head up the water to a level sufficient to irrigate lands on the banks of the streams by means of channels taking off from the flanks of the bandharas. The areas irrigated are up to 800 acres and the chief crops are sugarcane, wheat, bajri and gram. From these small beginnings have evolved the magnificent irrigation works, which now form such a conspicuous feature in the Deccan and have so successfully fulfilled their beneficent purpose in banishing the famines which formerly devastated this portion of the State.

2. The irrigation works in the Deccan are fundamentally different from those in Sind, the Punjab, Egypt or Mesopotamia, where wide alluvial plains have been formed by great deltaic rivers in perennial flow. The Bombay Deccan consists of a sloping table-land running eastward from the ridge of the Western Ghats. These form a ridge running parallel to the sea-coast at a distance from it of 50 to 100 miles; precipitous on the western side, they fall away more gradually to the east. The heaviest rainfall occurs on the peak of the ridge, where anything up to 270 inches of rain is recorded in the four monsoon months. The intensity of the rainfall rapidly decreases as we go eastward from the highest ridge reaching a figure of 20 or 25 inches at a distance of 100 to 150 miles east of the Ghats. The rivers in the Deccan rise in the valleys close to the ridge flow in an eastward direction and are dry or practically so for 7 or 8 months of the year. The line of the Ghats, like the ridge of a roof, divides the rainfall into two parts; one the small portion falling westward into the Indian Ocean, and the other flowing through long lengths of tortuous rivers to the east and joining the rivers, which reach the sea on the south-eastern coast of the peninsula. These rivers are in flow during the monsoon months only, and if no artificial means of conserving their waters were provided, the whole monsoon rainfall would be wasted so far as the Bombay Deccan is concerned, and would simply flow away to the sea benefiting but to a small extent the country traversed.

3. The large irrigation systems in the Deccan are all of the same type. Each depends upon a storage lake near the head of one of the river valleys, where sufficient water is collected during the monsoon to supply the country on either side of the river valleys below. The water stored during the rains is let out during the dry months of the year in accordance with requirements; and at a point on the river which may be as far as 50 miles from the main storage lake, a "pick-up-weir" is constructed across the river-course to divert the water into canals which take off on either side of the weir. In one case only, that of Lake Fife at Khadakwasla near Poona, do the canals take off from the flanks of the dam itself. The canals are always constructed at a considerably flatter slope than that of the river, and consequently are able to diverge from the river itself on each side of the Valley; as a rule each canal only irrigates the areas between itself and the river.

A brief general estimate of the work done during the year 1952-53.

NORTH GUJARAT CIRCLE.

The year under review was marked by rainfall which was below average. However, all the tanks except Tranza Nagrama tanks were fully filled. There was no carry over of storage for last year's Hot Season in most of the tank. The supply of the year under report was utilised in irrigating Kharif Crops, mainly rice.

The tank bed of the Saiat tank in Kaira District breached during the year under report and hence no water was stored but three acres were irrigated by the water from the borrow pits by lift. Special Repairs work to the breached portion was entrusted to the Mahi Canal Construction Division, Thasra. The Gangasagar tank in Banaskantha District, which was in charge of the Revenue Department, came in charge of the Public Works Department under this Circle and it was maintained at a cost of Rs. 3,800 during the year under report.

SOUTH GUJARAT CIRCLE

Special Repairs were carried out to Muwalia tank in Panch Mahals District to an extent of Rs. 19,644. Repairs to old tanks and drainage channels were carried out at a total cost of Rs. 9,18,584 and Rs. 1,85,246 respectively. The Doswada and Chikhli Bandhara canals in Surat District were maintained in good condition by carrying out current and special repairs at a cost of Rs. 16,483. As the existing capacity of the Doswada dam is insufficient to cope up with the growing demand, it was proposed to raise the Doswada dam by 5 feet thus increasing the capacity of the tank by 44 million cubic feet which will be useful for extending irrigational facilities to about 800 acres.

During the year 1952-53, the Minor Irrigation Works which were carried out under the special Programme of Rupees One Crore Loan, advanced by the Government of India in furtherance of the "Grow More Food Campaign", were in full swing. In this programme, priority has been assigned to repair works. 62 works were completed and 6 works remained in progress, during the year under report. One of the important work taken up under the Special Loan Programme of Minor Irrigation Works, was the construction of Tichakiya Weir and its canal system. About 12,000 acres are likely to be benefited by this Scheme. About 4,000 tons of additional food production is expected on completion of the canal system. The Weir Work is completed and an expenditure of Rs. 2,92,515 was incurred during the year under report. This work is estimated to cost Rs. 5 lakhs without Canal System.

GUJARAT IRRIGATION CIRCLE.

The Meshwa Canal Project, one of the Medium Irrigation Projects started under the Development Programme of the Bombay State is almost completed and water can be admitted into the canal for irrigation. The

Canal started functioning in 1950 monsoon. The total expenditure incurred on works upto 31st March 1953, was Rs. 46,05,034 including other charges. Another project viz. Mahi Right Bank Canal Project, estimated to cost Rs. 426 lakhs, is under execution. The project is anticipated to be completed in 1957 and to irrigate about 1,50,000 acres in Kaira District. An expenditure of about 45.75 lakhs of rupees was incurred on the Mahi Right Bank Canal Project to end of the year 1952-53. To meet the increasing demand of irrigation, proposals for adequate Extension and Improvements to the existing Wadhvana and Jojwa Irrigation System, to irrigate an additional area of 8,000 acres of land at an estimated cost of Rs. 7,52,000, were submitted to Government and the proposals have been administratively approved in Government Resolution, Public Works Department, No. MNT. 2352, dated the 9th March 1953. This work is being financed from the Government of India Loan of Rs. 40 lakhs. The Scheme consists of raising the pick-up-weir at Jojwa by 3 feet and increasing the discharging capacity of the existing feeder from 60 cusecs to 200 cusecs and extending direct irrigation on the Jojwa Feeder with improvement to the under Wadhvana tank.

As regards Vijapur Tube Wells Scheme in Mehsana District, 27 tube-wells were working during the year under report, 21 on electric power and 6 on oil engines. To encourage cultivation of rice crop and green manuring during Kharif of the year under report, Government approved a concessional water rate of 20,000 gallons per rupee for the Kharif Season i.e. from the 1st July 1952 to 30th September 1952.

During the year 1951-52, an agreement was made with Messrs. National Tube Wells Limited, Bombay, in connection with the work of drilling four hundred tubewells in the Distriits of Banaskantha, Mehsana and Ahmedabad in North Gujarat by the Company. During the year under report viz. 1952-53, 24 tubewells were drilled by the Company in Mehsana District out of which 22 tubewells are being harnessed.

An amount of Rs. 2,12,825 was spent during the year under report, on construction and maintenance of the Fatewadi Canals—a fair weather canal taken off of the Sabarmati River without any diversion Weir across the River. The total expenditure on the work to end of March 1953 was Rs. 8,92,603 for work portion only. In addition to above, the work of constructing interconnecting channels from Fatewadi main canal to the existing bund system near Fatewadi which is a subsidiary scheme solely dependent on the Fatewadi Eight Months' Canal ex-Sabarmati river, was also in progress during the year under report from the funds under the head "13-A Irrigation-Special Programme of Minor Irrigation Works" and an expenditure of Rs. 53,521 was incurred on it during the year under report. The total expenditure on this work to end of March 1953 was Rs. 1,00,058 for work portion only. An amount of Rs. 82,651 was spent on Special Repairs to Goblej Tank in Kaira District, for remodelling and strengthening the bund, during the year. Besides this, an amount of Rs. 78,676 was spent on maintenance and Special Repairs to Minor Irrigation Tanks in Baroda District, during the year under report.

BOMBAY CIRCLE.

The following works were undertaken as Minor Irrigation Works during the year under report :—

- (i) Lift Irrigation Scheme at Chawna, taluka Panvel, district Kolaba.
- (ii) Bandhara across the Mahisdara Nalla at Mutholi, taluka Roha, district Kolaba
- (iii) Bandhara at Shil, taluka Khalapur, district Kolaba.

An expenditure of Rs. 53,893 was incurred on the above schemes during the year under report. In addition to the above works, surveys of some works were carried out during the year under report.

DECCAN IRRIGATION CIRCLE.

A special feature of the year under report was that there was failure of post-monsoon rains in the irrigated tracts of all the Canals. The result was that the demand for water to Rabi crops, was very high and individual sanctions had to be restricted to have an even distribution of the available supply.

The Nira Right Bank Canal was designed for a full supply discharge of 1,500 cusecs at head but on account of very slow development of irrigation on the Canal, the demand was much less than the supply available and therefore the Canal was not being run to its full capacity with the result that the Canal got somewhat silted up. When the demand for larger supply grew, it was found that the Canal could not carry more than about 1,100 cusecs or so with safety. It was, therefore, proposed to remodel the first 50 miles of the Canal so as to increase its carrying capacity, by raising the banks, increasing the heights of gravity walls of aqueducts wherever necessary etc., and a project costing Rs. 15 lakhs was sanctioned in 1947, and work was started almost immediately. The work has been completed during 1952-53. The Canal was tested for a discharge of 1,400 cusecs during the year under report and it has since been made safe for a discharge of 1,500 cusecs.

As regards the Rakh tank in Poona District, contour survey was done during the year under report, to ascertain the correct silt deposition and the results are still awaited. The Gangapur Storage Project, estimated to cost about Rs. 334 lakhs (which is likely to be revised) is under execution. The project is anticipated to be completed in 1956 and to irrigate about 45,000 acres in Nasik and Ahmednagar Districts. An expenditure of about 196.61 lakhs of rupees was incurred on the Gangapur Storage Project to end of the year 1952-53.

In the Deccan, when a large perennial canal is opened, wide-spread water logging is liable to ensue and unless steps are taken to arrest and set it right, the damage consisting mainly of Salt efflorescence becomes permanent. There is a Special Division viz., Irrigation Development Division in this Circle and research and investigation into all the problems relating to irrigation by means of actual experiments, has been the sphere of work of this Division. Drainage schemes were carried out in the various Sugar factory areas to save lands from damage due to cultivation of Sugarcane by Sugar Companies. The detailed work done by this Division in this respect is given in Section III of the Report.

CENTRAL CIRCLE.

The work of Hotgi tank was nearly completed and the first six miles of the canal functioned during the year under report. The irrigation on the Hotgi tank has generally increased and the irrigators are getting irrigation-minded. The work of Sangwi and Parewadi tanks was also in progress. The work of Javala tank and Chincholi tank was started as scarcity work and the same was in progress during the year under report. The work of Mangi tank was taken up as scarcity work during the year under report. This was the only big tank which could be taken in Karmala Taluka which is generally the worst affected area of the Saolapur District. This earthen dam is being constructed across the River Kanala about half a mile to the west of Mangi Village which is about 3 miles from Karmala, the taluka place. The Saptana tank work was started as scarcity work during the year under report and the dam work and outlet works were completed. The dam, waste weir and outlet work of the Madanwadi tank was completed and the work of Right Bank Canal was also started and completed to a length of three miles and six furlongs together with cross drainage work. The dam, outlet and waste weir work of the Palasdeo tank was completed and the construction of Right and Left Bank Canals was also completed as scarcity works. The work of cross drainage works on both the canals was in progress. The total area likely to be irrigated after completion of this work will be about 1,380 acres.

The Ranand tank, estimated to cost about Rs. 21.5 lakhs, is under execution in this Circle. The scheme is expected to be completed in 1954, and to irrigate about 3,550 acres in North Satara District. An expenditure of about 12.23 lakhs of rupees was incurred on the Ranand tank project to end of the year 1952-53.

KARNATAK IRRIGATION CIRCLE.

During the year under report water was supplied to the Southern Railways from the Gokak Canal at the Ghataprabha Railway Station for the use of Railway engines, passengers and the Railway staff, at the rate of Rs. 122 per month as per Government Resolution, Public Works Department, No. MIP. 1152 of 23rd September 1952. Water was also supplied from the Gokak Canal to the Karnatak Health Institute for the use of drinking and gardening purposes for the inmates of the institute at a rate of Rs. 11 only per year as sanctioned by Government. In order to store water for irrigation during Rabi 1952-53 from the post-monsoon floods, the work of raising the temporary crest was started on 21st October 1952 and was completed on 2nd November 1952, in one instalment only. Sugarcane and long staple cotton were allowed to be grown on the Gokak Canal during the year under report. There is no cane area guaranteed on the Gokak Canal to any Sugar factory.

During the year under report, the work of extension and improvements was carried out to Dharma Canal due to which the Canal discharge was more during the year under report than that of the previous year.

An expenditure of Rs. 25,058 was incurred on surveying and preparing plans and estimates for repairs to Minor Irrigation Works under Loan Scheme. Repairs to 556 Minor Irrigation Works (Under Loan Programme)

were carried out and Rs. 5,56,415 were spent on their repairs during the year under report. In addition, repairs to 135 Minor Irrigation Works from ordinary funds were carried out and an expenditure of Rs. 98,010 was incurred on their repairs which includes the expenditure incurred on repairs to Irrigation Rest House as well as constructing a hume pipe aqua-privy in the compound of the Rest House at Girsinkop. An amount of Rs. 25,993 was spent on constructing irrigation tank at Mandihal, taluka Dharwar, and in addition, an expenditure of Rs. 7,731 was incurred on four bandharas in Belgaum District which had been practically completed during 1951-52.

The Ghataprabha Left Bank Canal Project, consisting of the first 44 miles of the Ghataprabha Left Bank Canal and two Branches 31 miles in length, is under execution in this Circle. The project, estimated to cost about Rs. 545 lakhs, is anticipated to be completed in 1956 and to irrigate about 1,20,000 acres in Belgaum and Bijapur Districts. The first eight miles of the canal have been completed and opened for irrigation in June 1951. An expenditure of about 196.47 lakhs of rupees was incurred on the Ghataprabha Left Bank Canal Project to end of the year 1952-53.

SOUTHERN CIRCLE.

In the Belgaum Division, repairs to 32 tanks were carried out at a cost of Rs. 21,472. Besides, a sum of Rs. 3,26,086 was spent on 13 Bandhara works and in addition to this sum, an expenditure of Rs. 30,420 was incurred on the work of surveying and preparing plans and estimates for repairs to Second Class tanks and Lift Irrigation Schemes. In Dharwar Division, repairs to six tanks were carried out at a cost of Rs. 14,714. There was a breach in aqueduct No. 1 on the Right Bank Canal of the Meundi Bandhara in Mundargi Petha of Dharwar District and the work of construction of a canal syphon in place of the aqueduct was completed during the year under report and water let out for irrigation. In Bijapur Division, the Asangi tank work was completed during the year under report and it began functioning from July 1952. Besides, an expenditure of Rs. 20,616 was incurred on bandhara works, financed from the one crore Special Loan Programme and in addition to this, an expenditure to the extent of Rs. 33,449 was incurred on scarcity works in Bijapur Division, financed from Special Loan for scarcity works.

In Kanara Division, an expenditure of Rs. 19,310 was incurred on irrigation works under 18-A Irrigation Loan Programme and in addition to this, a sum of Rs. 1,407 was spent in surveying and preparing plans and estimates for repairs to minor irrigation works during the year under report. In Ratnagiri Division, an expenditure of Rs. 47,066 was incurred for repairs to tanks and Rs. 43,535 for construction of masonry bandharas, improvements to tank and surveying and preparing plans and estimates for minor irrigation schemes under the Loan Programme. In Kolhapur Division, an expenditure to the extent of Rs. 1,52,204 was incurred on construction of minor irrigation works under the Special Loan Programme of Rs. one crore. Besides this, an expenditure of Rs. 45,302 was also incurred on the Vajrachounde Bandhara taken up as scarcity work financed from the Special Loan for scarcity works in Kolhapur Division.

The Kolchi weir Scheme, estimated to cost Rs. 21.41 lakhs (which is likely to be revised) is under execution in this Circle. The project is expected to be completed in 1956 and to irrigate about 3,700 acres in Belgaum District. An expenditure of about 16.26 lakhs of rupees was incurred on the Kolchi weir Scheme to end of the year 1952-53.

SECTION I

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

DETAILED REPORTS BY LOCAL OFFICERS.

NORTH GUJARAT CIRCLE.

The year under review was marked by rainfall which was below average and it broke out in the 2nd week of June 1952 and ended in 3rd week of August 1952. However all the tanks except Tranza-Nagrama tank were fully filled. There was no carry over of storage from last year's Hot Season in most of the tanks. The supply of the year under report was utilised in irrigating Kharif crops, mainly rice. The principal irrigation works in operation in this Circle are (1) the Wangroli Tank, (2) the Savli Tank, and (3) the Tranza-Nagrama Tank. All the three tanks are storage tanks, depending on local rainfall. The three works are financially unproductive, as the annual revenue is not sufficient to cover the working expenses.

First Class Irrigation tanks in Gujarat.

The three First Class tanks viz., Wangroli, Savli and Tranza-Nagrama tanks were constructed between the years 1904 and 1917 at the aggregate cost of Rs. 8 lakhs. They rarely yield net return, as the demand of water from them is smaller in years of good rainfall whereas in years of scarcity, the tanks themselves store deficient supplies. All the three tanks are situated in Kaira Collectorate.

The area irrigated and the revenue assessed in connection with the tanks during the year are compared with the average of the preceding three years as below :—

Name of Tank.	Year.	Kharif.		Rabi.		Total.	
		Area irrigated.	Assessment.	Area irrigated.	Assessment.	Area irrigated.	Assessment.
		Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
Wangroli	... Average	577	2,847	270	1,067	847	3,914
	1952-53	2,097	11,106	...	...	2,097	11,106
Savli	... Average	1,068	6,128	19	74	1,087	6,202
	1952-53	2,126	10,964	...	...	2,126	4,10,964
Tranza-Nagrama..	... Average	75	274	5	10	80	284
	1952-53	164	539	7	7	161	546

WANGROLI TANK

The rainfall gauged at the site of the tank was 29·06 inches. The tank was fully filled and the water was utilised in irrigating Kharif crops mainly rice. The miscellaneous revenue realised during the year amounted to Rs. 1,123 against Rs. 3,530 of the previous year. No remission was sanctioned during the year, under report.

SAVLI TANK

The rainfall gauged at the site of the tank was 29·15 inches. The tank was full of water which was utilised for irrigating Kharif crops comprising mainly of rice. The miscellaneous revenue realised during the year amounted to Rs. 2,449 against Rs. 2,164 of the previous year. No remission was sanctioned during the year.

TRANZA NAGRAMA TANK

The rainfall gauged at the site of the tank was 25·75 inches. Tranza tank was partially filled with a maximum storage of 30·24 millions cubic feet. Nagrama tank was not filled in, at all as there was unusually heavy seepage through the tank bed which is sandy and porous. Thus percolation losses were heavy. The water of Tranza tank was utilised for irrigating kharif crops mainly comprising rice. The miscellaneous revenue realised during the year amounted to Rs. 1,152 as against Rs. 2,396 of previous year. No remission was granted during the year under report.

The percentage returns obtained during the year from the working of these tanks are shown below :—

Name of Tank.	Gross assessment.	Gross realisation.	Net revenue.	Capital outlay direct and indirect to end of 1952-53.	Percentage of return.
	Rs.	Rs.	Rs.	Rs.	
Wangroli ...	12,229	5,359	—2,019	2,92,295	—0·68
Savli ...	11,413	9,594	2,392	2,65,210	0·94
Tranza Nagrama ...	1,698	1,371	—5,159	2,80,635	—1·8

SOUTH GUJARAT CIRCLE

The monsoon during the year under report broke out in the 2nd week of June 1952. In comparison to irrigation of last two years, this year there was a great demand for water on account of untimely rains. The total rainfall was below average.

The principal irrigation work in this Circle is Futelao Tank in Dohad Taluka, Panch Mahals District. This work is financially unproductive as the annual revenue derived therefrom in ordinary years is not sufficient to cover even the working expenses of the tank. The Futelao Tank rarely yields any return as the demand of water therefrom in year of good rainfall is scanty whereas when there is more demand, the tank is not properly replenished.

The rainfall gauged at the site of the tank was 24·8 inches during the year under report and the tank was filled upto F.S.L. R.L. 107·00. The water was utilised in Kharif and Rabi seasons. There was no irrigation in Hot season for want of sufficient replenishment.

The rainfall for the year under report along with the previous two years, is as under :—

	1950-51.	1951-52.	1952-53.
	Inches.	Inches.	Inches.
Futelao Tank	48·49	16·20	24·80

The annual average rainfall in the area of this tank is 29 inches and as such the rainfall during the year under report was below average. The population of the surrounding area is backward; hence irrigation is far below the irrigable capacity of the tank which is 800 acres and cultivable area under command which is 1,200 acres. This year, the irrigators demanded water at the end of Kharif season as they did not get the last rains and crops began to fail and hence the demand went up to 233·33 acres. The irrigation during the year is as under, which shows comparatively better progress than the average figures of last two years, due to good irrigation in Kharif season.

Name of season.	Area irrigated.		Amount.	Average irrigation.
	Acres.	Gunthas.	Rs. a. p.	Acres.
Hot weather season ... ..	.....	.....	.....	.....
Rabi season	275	25	771 15 0	} 366
Kharif season	233	33	515 0 0	
Total	509	18	1,286 15 0	

The percentage return obtained during the year under report from the working expenses of the tank is as shown below :—

Name of tank.	Gross assessment.	Gross realization.	Net revenue.	Capital outlay direct and indirect.	Percentage of return.
1	2	3	4	5	6
	Rs. a.	Rs. a.	Rs. a.		
Futelao Tank	1,286 15	141 4	—10,836 12	1,16,461	—0·09

GUJARAT IRRIGATION CIRCLE

The area under irrigation in Gujarat is not compact. Rainfall is often insufficient and always ill-distributed. Irrigation tanks and canals help to tide over the unevenness of precipitation of rain and give the crucial watering to rice in a long break in the monsoon itself or after the end of rains in September and October, thus ensuring a successful rice crop irrespective of the distribution of rainfall in the monsoon months. Tank and canal systems depend on the total rainfall of the region, for filling or for yielding a sufficient flow, to meet irrigational demands. The catchment areas as well the irrigated areas are nearly of the same rainfall characteristics.

Monsoon in Gujarat generally starts in July. During 1952-53, it started just in time and was continuous from 2nd week of July 1952 to middle of August 1952, but then disappeared altogether. The rainfall thus proved to be both deficient and very much ill-distributed. The rainfall during the year under report was however just equal to the average of the past three years. Nearly 66 per cent. of the total rainfall of the year occurred during the short period of one week only, viz., 24th July 1952 to 2nd August 1952. With this heavy intensity of precipitation, almost all tanks which had hardly a drop of water before rains, were found overflowing in a couple of days. This resulted in the beaches of important tanks like the Karachia, Muwal and Dhanora tanks in Baroda District. Beaches in these three tanks caused a complete loss of irrigation of about 3,000 acres. The failing Kharif crop was saved, as far as possible, by careful and judicious distribution of water from tanks and canals. Scarcity conditions had however to be declared in some of the talukas. The total area protected under irrigation system was 61,903 acres.

The Principal irrigation works in this Circle are :—

VIJAPUR TUBE WELLS SCHEME : (MEHSANA DISTRICT)

During the year under report, 27 tube wells were working, 21 on electric power and 6 on oil engines.

Water is sold on a volumetric basis at Re. 1 per 10,500 gallons. Most tube wells give a discharge of 18,000 gallons to 25,000 gallons per hour. The average discharge of the tube wells comes to about 12,000 gallons per hour.

Just like previous year, the Government in Public Works Department, had approved the concessional water rate of 20,000 gallons per Re. 1 for the Kharif Season i.e. from 1st July 1952 to 30th September 1952, under their Government Resolution, Public Works Department, No. WTR. 1451, dated 16th January 1953. The benefit of concessional rates was taken by the irrigator for 28 acres, 14 gunthas of paddy only.

As there was no rain after August, other crops like Bajri, Variali, Tobacco, etc. that usually do not require water during monsoon, took water at the concessional rate.

It is difficult at this stage to say conclusively that this concession has been either a success or a failure in creating a stable demand for water during monsoon period. This experiment is to be continued for some years, coupled with a experiment on the Agricultural Department's farm to establish paddy, sunnhemp, green manuring, groundnuts and such other monsoon crops in the annual cropping scheme of the area. During Rabi, the demand is intense and commercial crops like Variali, Jiru, Tobacco are grown to the extent of 50 per cent. and wheat 50 per cent. In Hot Weather, poor type millets Kang, Cheno and Chasto are grown to a fair degree.

The area irrigated and revenue assessed in connection with the Tube Wells Scheme at Vijapur as compared with the averages of the preceding three years are as under :—

Year.	Area Irrigated.		Net revenue assessed.	
	Acres.		Rs.	
Average.	2222		33,625	
1952-53	2794	...	1,32,258	

No remissions were sanctioned during the year under report. The gross revenue realised from all sources amounted to Rs. 1,56,190 during the year under report. This figure shows a net profit of 5.50 per cent. on the capital outlay of Rs. 14,42,428. The expenditure on account of the working expenses on this scheme does not include the expenses of the Power House incurred to generate power and supply it free to Civil Engineering Organisation on the Tube Wells. The maintenance expenditure including workcharged establishment on electrical side during 1952-53, as communicated by the Executive Engineer, Electrical Division, North, is Rs. 1,08,110 inclusive of centage charges and workcharged establishment. When this be taken into account, revenue falls short of working expenses even.

HATHMATI AND KHARI CUT CANALS.

This system includes a diversion weir on rock foundations across Hathmati River at Himatnagar and a canal which feeds Bokh Reservoir of 300 million cubic feet formed in depression and banded by an earthen dam. In addition to doing some direct irrigation under the canal, it also supplements (after filling Bokh Reservoir) the flow in the neighbouring Khari River across which a weir on permeable foundations exists at Rajpur. From this weir, a canal in cutting diverts the water into Motia Vehla, and thence to a canal system which is meant to fill up a series of tanks till middle of August every year and thereafter do direct irrigation.

This is an old system first opened in 1873-74. It irrigates a tract of land lying between Sabarmati and Khari rivers. In addition to irrigating the area dependent on it, it is designed to pass surplus water, when available first into Bokh Reservoir 300 million cubic feet and then into the Khari river direct via Bhujwa Channel and through Bokh Reservoir. The Bokh Reservoir has no direct command under it. It only acts as

storage reservoir for supplementing the flow in the Khari river, to be picked up at Raipur weir and used in the commanded area of Khari Cut Canal.

Further downstream of Raipur on the Khari River is situated the irrigation system of Khari sluices. According to a High Court Decree, the riparian rights of the Kalambandhi people claimed the natural flow in Khari river for the Khari Sluice System. But now, as per agreement between the "Government of Bombay and Kalambandhi villages for the waters of Meshwa Canal", dated 22nd January 1948, the Kalambandhi people get 70 cusecs of water at Pinglaj, during the monsoon season from the Meshwa Canal (from 1950-51 onwards) in lieu of their riparian rights over the natural flow of Khari river. Now the natural flow of Khari river is also diverted at Raipur into Khari Cut Canal for irrigation. This has assured the filling up of Chandola and other tanks and so improved the flow conditions in the Khari Cut Canal that larger areas of rice can be protected in the commanded area.

The rainfall gauged at Himatnagar Head Works of Hathmati canal and at Prantij, in its commanded area are 28.62 inches and 25.24 inches, respectively, against an average of 30.43 inches and 22.90 inches, respectively, of the preceding three years. Similarly the rainfall at Ahmedabad and at Bareja at the head and tail of the commanded area of Khari Cut Canal System, was 29.39 inches and 24.04 inches, respectively against an average of 29.84 inches and 24.96 inches, respectively of the preceding three years.

The Hathmati river was four times in low floods and two times in high floods during the year under report. The weir overflowed for more than 30 days and to a depth of 3 feet to 4.5 feet for most of the time. Bokh Reservoir was filled up to gauge 22.70 or 335 million cubic feet. The canal discharge was 284 cusecs on 1st September 1952 and 170 on 1st October 1952. During Rabi season, the average daily discharge admitted into canal and its head was 49 cusecs which was fully utilised for irrigation. The Khari river rose in flood four times during the season. All the available stable discharge of the river at Raipur was taken into Khari Cut Canal for filling the tanks and for direct irrigation.

The gross area sanctioned, the net area irrigated and revenue assessed in connection with the Hathmati and Khari Cut Canals as compared with the average of the preceding three years are as under :—

Year.	Kharif.			Rabi.			Total.			
	Gross area sanctioned.	Net area irrigated.	Net assessment.	Gross area sanctioned.	Net area irrigated.	Net assessment.	Gross area sanctioned.	Net area irrigated.	Net assessment.	
I	2	3	4	5	6	7	8	9	10	
Average	...	Acres. 7,800	Acres. 6,712	Rs. 29,947	Acres. 2,234	Acres. 2,198	Rs. 9,028	Acres. 10,034	Acres. 8,911	Rs. 38,975
1952-53.										
Hathmati Canal	...	3,155	3,155	29,855	2,260	1,816	19,062	5,415	4,071	48,717
Khari Cut Canal	...	14,820	14,150	1,18,312	441	441	2,142	15,261	14,591	1,20,454
Total	...	17,975	17,305	1,47,967	2,701	2,257	21,204	20,676	19,562	1,69,171

Total gross assessment worked out to Rs. 1,79,484 out of which remissions amounting to Rs. 10,313 were sanctioned during the year under report for failure of crops due to shortage of water.

There are other sources of revenue viz. Lotus, Singoda plantation, grass and other tank bed cultivation. Total recovery on account of these sources was Rs. 46,068 during the year under report.

The gross revenue realised from all sources amounted to Rs. 1,52,657 and there was a net profit of Rs. 4.52 per cent. on the total capital outlay of Rs. 13,18,729.

WADHWANA AND JOJWA IRRIGATION SYSTEM (BARODA DISTRICT).

There is a shallow diversion weir at Jojwa founded on rock across the Orsang river. The Jojwa feeder canal channel takes off from the Jojwa Head Works with a small direct irrigation system near Bahadarpur. It feeds the artificial Wadhvana Tank of about 453 million cubic feet capacity. The system as it exists today comprises of :—

(1) The head works, i.e., a low weir across the Orsang at Jojwa with a right bank canal of 60 cusecs capacity, and

(2) A storage tank near Wadhvana about 11 miles lower down.

Until recently, there was practically no demand for direct irrigation from the Jojwa Canal. The canal therefore served merely as a feeder to Wadhvana Tank. Irrigation under this tank was not quite popular and the scheme could not pay even its bare maintenance. Of late, the prospects have much improved. Inclusive of some 300 acres of direct irrigation, the area irrigated under the system has reached a figure of some 4,500 acres in 1951-52 and 6,100 acres in the year under report. To meet the increasing demand of irrigation, proposals for adequate Extension and Improvements to the existing system, to irrigate an additional area of 3,000 acres of land at an estimated cost of Rs. 7,52,000, were submitted to Government and the proposals have been administratively approved in Government Resolution, Public Works Department, No. MNT. 2352, dated 9th March 1953. This work is being financed from the Government of India Loan of Rs. 40 lakhs. The scheme consists of raising the pick-up-weir at Jojwa by 3 feet and increasing the discharging capacity of the existing feeder from 60 cusecs to 200 cusecs and extending direct irrigation on the Jojwa Feeder with improvement to that under Wadhvana Tank.

The rainfall at Jojwa and Wadhvana was 29.47 inches and 26.61 inches, respectively, against 36.2 inches and 37.66 inches, the average precipitation, respectively, of the past three years.

The figures of area irrigated and revenue assessed as compared with the average of the preceding three years are as under :—

Year.	Kharif.		Rabi.		Total.	
	Area irrigated.	Net assessment.	Area irrigated.	Net assessment.	Area irrigated.	Net assessment.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
Average	2,683	*	1,312	*	3,995	*
1952-53	4,249	23,003	1,854	14,603	6,103	37,606

*Note—Tanks have been taken in charge, on 16th May 1950. Water was given free of charge in the past.

The area irrigated under the Wadhvana and Jojwa Irrigation System during the year under report was 6,103 acres which surpasses all previous records of irrigation under this system for the past 27 years. It also shows an increase of 25 per cent., over the figure of 4,840 acres which was the maximum area under irrigation during 1950-51. The main reason for this record irrigation during the year under report, in spite of failure of rains during August and September may be attributed mainly to :—

- (i) allowing water in Wadhvana Tank through Jojwa main canal immediately it was possible to do so ;
- (ii) increase in duty due to systematic distribution of water ; and
- (iii) co-operation of irrigators.

The other two sources of revenue viz., grass and tank bed cultivation are also showing most appreciable rises, as can be seen from figures below :—

Y. ar.	Revenue.	
	Grass.	Tank bed cultivation.
	Rs.	Rs.
1949-50	1,821	4,506
1950-51	3,500	9,591
1951-52	4,631	25,609
1952-53	6,433	37,788

The gross revenue actually realised during the year under report from all sources was Rs. 44,132 (Rs. 6,433 realised by the Public Works Department Division and Rs. 37,699 through the Revenue Department). There was a net profit of 0.68 per cent., during the year under report on the total capital of Rs. 11,56,000. No remissions were paid during the year under report.

MESHWA CANAL PROJECT.

This canal takes off from the Meshwa river with a pick-up weir across the river at Raska in Mehmedabad Taluka of the Kaira District. The weir is 14 feet high, founded on permeable foundations, to elevate and divert the monsoon supplies of the Meshwa river for purposes of irrigation. The canal is on the right bank and it goes in a deep-cutting (maximum 25 feet) till the water comes above ground level in mile 7 from where the commanded area starts. This is the first Medium Irrigation Scheme completed since the construction of Hathmati and Khari Cut Canals.

The main purpose of the scheme is to give a discharge of 70 cusecs during the monsoon at Pinglaj for the Kalambandhi areas thus enabling to divert the natural flow of the Khari river into Khari Cut Canal System. The Kalambandhi people had riparian rights over the natural flow of the Khari river across which Raipur weir was built for the Khari Cut System. The riparian rights have been the cause of many disputes, almost every monsoon and were mainly responsible for the restriction of irrigation in the Khari Cut commanded area. This situation has been changed after the supply of water from the Meshwa Canal.

In addition to the supply of water to the Kalambandhi people, the Meshwa Canal Project, aims at to fill, in an unfailling manner, the Galki and Goblej tanks which were not filling up annually from the spills of Khari river. It is also to do direct irrigation from such supply in excess of the above two requirements. The project is almost completed and water can be admitted into the canal for irrigation. The canal started functioning in 1950 monsoon. The total expenditure incurred on works upto 31st March 1953 was Rs. 38,35,566 for work portion only and including other charges, it came to Rs. 46,05,034.

The monsoon was an average one but the rainfall was not fairly distributed throughout the season. There was no rain after 15th August 1952. The Galki and Goblej tanks were filled upto their F. S. L. capacity without any loss to the requirement for other areas. The Kalambandhi people were supplied 70 cusecs upto end of October and afterwards reduced supply was given to middle of November 1952 as per requirement.

The area irrigated and revenue assessed during the year under report as compared with the figures of the previous year are as under :—

Year.	Area irrigated.			Net revenue assessed.		
	Khariif.	Rabi.	Total.	Khariif.	Rabi.	Total.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1951-52	655	1,114	1,769	3,896	10,125	14,021
1952-53	8,112	2,664	5,775	80,010	24,894	54,404

Total gross assessment worked out to Rs. 54,405 out of which no remission was sanctioned during the year under report. About 7,000 acres of paddy crops thrived in the Kalambandhi area (Khari Sluices area) due to this canal. The administration of the Khari Sluices area is under the control of the Revenue Department. It is a Second Class Irrigation Work with Himayat levied by the Revenue Department.

DECCAN IRRIGATION CIRCLE

The rainfall of the year was on the whole deficient. It was generally satisfactory in the catchment area of the storages during the monsoon season of 1951-52. But due to total failure of September rains in the Deccan Irrigation tract, the draw off of the Deccan Canals was commenced earlier than usual in September 1952. The result was that all the tanks could not behave in a normal manner and steps were taken to utilise the available supply to the maximum Rabi area.

The following ten sugar factories have been established on the Deccan Canals. The acreages for which water is guaranteed, cane area and area of food crops irrigated and capacity in tons per day at present are noted against each :—

Name of sugar factory.	Annual guarantee of water supply for acres of sugar cane.	Cane standing on 15th June 1952.	Area of food crops irrigated.	Crushing capacity in tons per day.
1	2	3	4	5
	Acres	Acres	Acres	Tons
1. The Belapur Company Limited, Harigaon, Pravara Left Bank Canal.	2000 On area basis. 1500 On V. B.	8338	1884	1200
2. The Maharashtra Sugar Mills Limited, Tilaknagar, Pravara Left Bank Canal.	4250	8707	1193	1000
3. The Walchand Industries Limited, Walchandnagar, Nira Left Bank Canal and Nira Right Bank Canal.	1571 N. L. B. C. 1929 N. R. B. C. <hr/> 3500	1442 1900	2376 1859	..... 1300
4. The Phaltan Sugar Works Limited, Sakharwadi, Nira Right Bank Canal.	2500	1990	1629	650
5. The Briban Maharashtra Sugar Syndicate Limited, Porgaon, Nira Right Bank Canal.	2000	2000	305	1000
6. The Siswad Mali Sugar Factory Limited, Malinagar, Nira Right Bank Canal.	1600	1202	1675	450
7. The Rawalgaon Sugar Farm Limited, Rawalgaon, Girna Canal.	1505	1505	1227	750
8. The Godavari Sugar Mills Limited, Kanhegaon, Godavari Left Bank Canal and Godavari Right Bank Canal.	1150 G. R. B. C. 1700 G. L. B. C.	1053 1602	347 372	650 950
9. The Shree Chanddeo Sugar Mills Limited, Pontamba, Godavari Right Bank Canal.	100 Temporary increase. 1000		183	850
10. The Belwandi Sugar Farm Limited, Belwandi, Visapur Canal	*Nil	408	178	250

Note.—*No guarantee in respect of area is given to the Belwandi Sugar Farm Limited but 3/4th of the water supply available on the 15th November in the Visapur Tank is guaranteed annually.

GUL MANUFACTURING CONCERNS.

Messrs. Chitale Agricultural Products Limited grow cane to the extent of 600 acres on distributory Nos. 52 and 58 (Eliv Minor) of the Nira Right Bank Canal for manufacturing gul. This has been allowed on long term agreement as is done in the case of other sugar factories.

POONA IRRIGATION DIVISION.

The following major irrigation works are in charge of the Poona Irrigation Division :—

- (i) The Lloyd Dam at Bhatgar, about 32 miles to the South of Poona.
- (ii) Pick-up-weir at Vir.
- (iii) Nira Left Bank Canal with Shetphal Tank with their distributaries.
- (iv) Khadakwasla Dam—About 10 miles to the West of Poona with Mutha Right Bank and Mutha Left Bank Canals including Matoba Tank—a tail tank of Mutha Right Bank Canal in Dhond Taluka.

A special feature of the year under report was that there was failure of post-monsoon rains in the irrigated tracts of all the canals. The result was that the demand for water to Rabi crops, was very high, and individual sanctions had to be restricted to have an even distribution of the available supply. Unauthorised irrigation of Rabi crops developed to a large extent, in consequence of these restrictions.

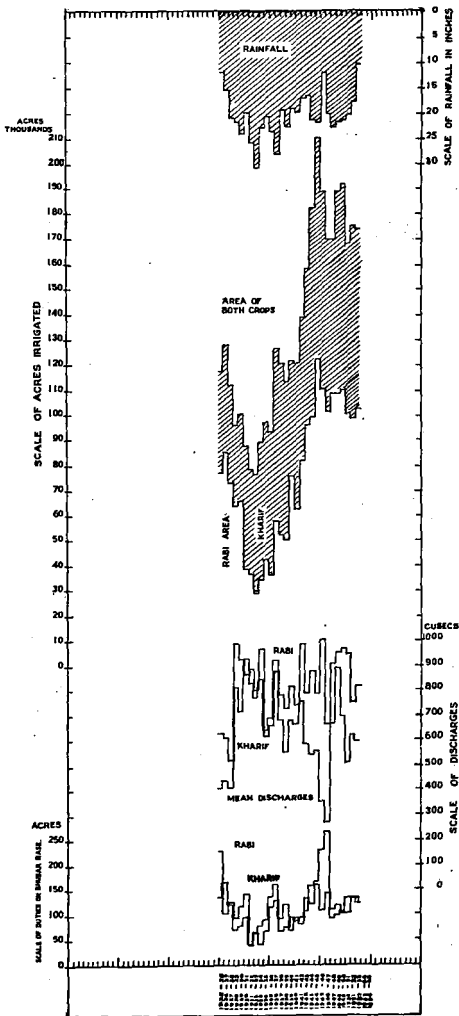
THE LLOYD DAM AT BHATGAR.

The Lloyd Dam at Bhatgar is one of the largest dams in India. It impounds 24,198 million cubic feet of water. The maximum height of the dam in the river bed is 190 feet and its length including waste weir is 5333 feet. It is a masonry dam of gravity sort which contains 21½ million cubic feet of masonry. It was built at a cost of Rs. 172 lakhs. The catchment area of this dam is 128 square miles. In this area the annual rainfall varies from 250 inches in the Ghats to 40 inches at the site of the dam. 81 waste-weir gates are provided for in the dam. These are used for controlling the flood waters. Sluices at different levels are provided for letting out water for irrigational purposes. Hydro-electric power is generated with the help of turbines fixed for the purpose at the down stream of the dam and in that direction the water is further utilised.


PICK-UP-WEIR AT VIR.

This is an old small weir across the river Nira at Vir Village in Purandhar Taluka. It is located at a distance of about 17 miles to the east of Lloyd Dam. This weir can hold water to the extent of 232 million cubic feet. Its height is only 42 feet. It cannot avail of flood water of the Nira River in monsoon beyond 11 feet and thus automatically it begins to overflow after that level. The two canals—Nira Right and Nira Left Bank Canals off-take from this place and draw off water from this weir.

WORKING RECORD FOR NIRA R.B. & L.B. CANALS, 1925-26 TO 1952-53.



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 EXECUTIVE ENGINEER
 PUNJA IRRIGATION DEPARTMENT

NIRA LEFT BANK CANAL AND SHETPHAL TANK

The Nira Left Bank Canal is one of the oldest canals in this State. The original works on this canal were started in the year 1881 and completed after 5 years. The canal began to function from the year 1885-86. The original safe carrying capacity of this canal was 456 cusecs only. The lands which are situated on the left bank of the Nira River are irrigated by this canal. Due to increased capacity of Bhatgar dam and in order to bring additional area of various types of crops under irrigation, the work of widening and remodelling the canal was started in the year 1925-26 and completed in the year 1942-43. Since the completion of this work, the safe carrying capacity of the canal is increased by 264 cusecs bringing the total safe carrying capacity from 456 cusecs to 720 cusecs. The culturable area that comes under the command of this canal is 1,49,821 acres at present.

SHETPHAL TANK

This is located at the tail portion of the Nira Left Bank Canal. This tank has been constructed with a view that all available water which otherwise overflows the Vir weir in monsoon season, is let down through the Nira Left Bank Canal and is stored up for irrigation purposes, particularly in Rabi and Hot Weather Seasons. This tank has a storage capacity of 592 million cubic feet of water. The full supply level of the tank is 37.5 feet. There is only one channel, named Shetphal channel. The channel draws off water from the tank and then water is distributed through 22 outlets constructed over this channel. An area of 23,000 acres is commanded by this tank.

The level of water in the Shetphal tank went down to the lowest depth of 13 feet (contents being 60 million cubic feet) on 27th June 1952; the tank reached its full supply level i.e. 37.5 feet on 10th October 1952. The level was constant upto 14th October 1952.

POSITION OF STORAGE IN THE LAKE WHITING AT BHATGAR

On 15th February 1952, the depth of water in the lake was 96.75 feet (contents being 8,768 million cubic feet). On 1st April 1952, the depth was lowered down to 85.15 feet (contents being 5,826 million cubic feet). The depth of water in the lake went down to the lowest level on 22nd June 1952. It was 54.50 feet (contents being 1,239 million cubic feet). From these figures it will be seen that the level of the water in the lake was decreased than that of the last year which was 61.30 (contents being 1,905 million cubic feet). From 23rd June 1952, the replenishment in the tank started and the level of the lake was then 55.20 (contents being 1,301 million cubic feet). On 29th August 1952 the water in the lake reached the highest level i.e. 143 feet (contents being 24,198 million cubic feet). Last year's highest level was 131.80 (contents being 19,853 million cubic feet).

The first draw-off from the lake began on 7th September 1952 and depth of water was then 142.80 feet (contents being 24,118 million cubic

feet). Watering for Rabi crops was started from 14th October 1952. During the Rabi rush, the level of water in the lake began to fall rapidly and the depth of water on 15th November 1952, was 126.65 feet (contents being 18,000 million cubic feet). On 15th December 1952, it was at 114.80 feet (contents being 14,065 million cubic feet). On 15th January 1953 it was at 105.20 feet (contents being 11,142 million cubic feet). On 14th February 1953 i.e. the last day of the irrigation year, the level in the lake was only 98.97 feet (contents being 9,372 million cubic feet) against the height at 97.05 feet (contents being 8,848 million cubic feet) of the last year.

On reviewing the position of water in the lake it is seen that the storage condition was not so better as that of the last year: and hence no post and preseasonal watering and water to Hot Weather fodder crops were allowed. At the end of the irrigation year the position of water was the same as that of the last year and restriction over Rabi crops was therefore imposed.

The position of rainfall in the irrigation tract on the Nira Left Bank Canal during the year under report was not satisfactory. In the month of June, there was rain from its first week. In the month of July, though there was better rain-fall, it was less than that of the last year. In the month of August, there was rain only at Bhatgar and at the other stations, there was no rain. In the month of September and October, there was rain but it was below normal. In the months of November and December, there was no rain at all as that of the last year. As the months of November and December passed without rains the level of water in the Lake Whiting and Bhatgar was less. It began to fall rapidly because the water was being utilised to meet the demand of Rabi crops. The total rainfall in the irrigated tracts of the Nira Left Bank Canal during the year under report was only 11.01 inches against 18.49 inches of the last year.

At the beginning of the year under report, the condition of water in the Lake Whiting was worse than that of the last year. Hence water was not allowed to Hot Weather fodder crops like kadwal, hundi and maize, to the cane block holders and average holders in the Sugar Factory area. Preseasonal water to cotton in cane blocks only was allowed on Shetphal channel and Hot Weather fodder crops were also allowed on Shetphal Tank. Sal crop was allowed to the extent of 3,000 acres, on the Nira Left Bank Canal. The demand for monsoon food crops was satisfied as usual, in the monsoon season. Water to ground nut crop was allowed on Form No. VII. Adsali overlap was allowed in the Kharif season to the extent of 40 per cent. in cane block. Vegetables to the extent of 250 acres were also permitted in the Kharif. In Rabi season though the condition of water in the Lake at Bhatgar was better than that of the last year, full demand could not be satisfied. No follow on crops were allowed in Rabi season after harvesting sal and other crops. Khapla was allowed in cane blocks to the extent of 20 gunthas to 6 acres block holder; and above that only 1 acre was allowed in the Rabi season. Suru overlap was not allowed in the year under report.

The following table shows the total revenue, area under irrigation, rainfall etc. during the year under report as compared with the average of past three years :—

Particulars.	Nira Left Bank Canal including Shetphal Tank.	
	1952-53	Average.
Area irrigated in acres ...	78,783	79,264
Water rate assessed ...	Rs. 14,99,790	12,09,040
Gross assessed revenue from all sources. ...	Rs. 16,17,767	12,35,412
Realisations ...	Rs. 15,17,179	10,08,887
Rainfall in inches ...	11.01	20.70

Remissions amounting to Rs. 14,198. were sanctioned during the year under report. Reasons for remissions were as under :—

(i) Penal assessment which is reduced on further consideration of some cases and

(ii) 1/3rd remission of pazar.

The cost of measuring irrigated crops during the year under report worked out to 17 pies, per acre as compared with 14 pies per acre during the previous year. The cost of measuring the crops was increased by 3 pies than that of last year which was due to the increased rates of labour charges. The total area measured was 82,063 acres and cost of measuring that area was Rs. 7,300 during the year under report.

The figures of areas under irrigation in blocks as compared with the figures of the previous year are given in the subjoined statement :—

Name of block.	Shetphal Tank.		Nira Left Bank Canal.	
	1951-52.	1952-53.	1951-52	1952-53.
	Acres.	Acres.	Acres.	Acres.
Cane blocks ...	795	786	14,111	14,108
Fruit and garden blocks 3 ² ...	20	20	421	425
Two seasonal food and fodder blocks ...	1,419	1,348	23,740	23,312

There is very little decrease in the area of cane and garden blocks as compared with the last year. The small decrease in the area of two-seasonal blocks is due to some irrigators having not got the period of their two-seasonal blocks extended.

In the following statement the position of cane blocks of the owner irrigators and tenant irrigators sanctioned separately is shown :—

Name of Canal.	Owner irrigators sanctioned area in acres.	Tenant irrigators sanctioned area in acres.
Nira Left Bank Canal including Shetphal Tank.	12376-33	2517-23

MUTHA CANALS INCLUDING MATOBA TANK.

This system came into operation in the year 1874-75. The canals were constructed at a cost of above Rs. 65½ lakhs which includes cost of storage reservoir by name 'Lake Fife' on the Mutha river at Khadakwasla at a distance of about 12 miles to the West of Poona. The dam is 107 feet high spanning the valley of the river Mutha. The Mutha Canals Irrigation System comprises of two canals on either side of the river viz. Mutha Right and Mutha Left Bank Canals 70 and 18 miles long respectively, taking off direct from the Lake. The maximum designed discharges of the two canals at their heads are 412 and 38.5 cusecs, respectively, but the present maximum discharging capacity due to constant running for town water supplies and constant weed and silt growth, is about 300 and 20 cusecs respectively. It is not possible to improve the capacity of the Mutha Right Bank Canal until a separate pipe line is provided from the Dam to the City for the town water supply. There are two tanks (i) Matoba and (ii) Khamgaon at the tail portion of the Mutha Right Bank Canal situated in mile Nos. 43 and 50 respectively having separate feeding channels from main canal to receive surplus water from the lake during the monsoon season.

The Lake Fife has a storage capacity of 3,091 million cubic feet. The storage of water in the lake is utilised partly for drinking and domestic purposes in the City and Cantonment of Poona and Kirkee and partly for irrigation purposes during the whole year. The Mutha Right Bank Canal supplies water for drinking and domestic purposes to the Poona Municipal Corporation, Poona Cantonment Water Works, Deccan Paper Mills and other public bodies. The demand for water for these purposes has greatly increased in the recent years i.e. since last eight years and is still on the increase. It becomes difficult to meet with the demand of irrigation and non-irrigational purposes due to the increasing population. The balance of water thus available is insufficient to meet the full requirements of irrigation and hence the perennial limit of Mutha Right Bank Canal from Distributary No. 7 to Distributary No. 9 is deperennialised with effect from 15th February 1952 *vide* Government Letter, Public Works Department, No. 6040/36-I.B.(I), dated 14th June 1950.

The Mutha Left Bank Canal is supplying water for perennial irrigation throughout its whole length and also for domestic purposes to a part of the extension of Poona and Kirkee in the area where the Corporation has not yet extended their water supply arrangements. Some of the pipe connection holders have taken pipe connections from Municipal Mains and hence their connections from the canal have been cut off. Since the year 1942, the demand for non-irrigational purposes increased so much that the supply of canal water to sugarcane on average system and new other perennials on both the canals had to be stopped to make that much water available for growing of food and fodder crops.

During the year under report, the level of the water in the lake on 1st April 1952 was 21.95 feet with corresponding contents of 1562 million

cubic feet against a level of 19-15 feet and contents of 1290 million cubic feet on the same date of the previous year. Replenishment began to be received from 22nd June 1952 when the lowest level of water was 11.65 and contents being 670 million cubic feet. The level of the water reached 33.70 feet on 5th September 1952 with the contents 3046 million cubic feet. The level of the water in the lake at the commencement of the Rabi season i.e. on 15th October 1952 was 32.40 feet that is 1.60 feet less than the maximum. Regular draw-off commenced from 16th October 1952.

The rainfall at Khadakwasla during the year under report was 31.76 inches against 32.05 inches in the previous year. The average rainfall in the canal tract was 29.73 inches against 26.57 inches in the previous year. The following table gives the runoff from the catchment area of the lake:—

Catchment area in square miles.	Actual run-off in million cubic feet.	Particulars.	Million cubic feet.
196	48,600	Discharge over weir including leakages.	... 43,465
		Discharge through escapes and under sluices	... 434
		Draw off in the canal	... 4,698
		Losses due to evaporation etc.	... 465
		Total	... 49,062
		Net loss in the contents in lake between 1st April 1952 to 1st April 1953.	... 402

The maximum flood occurred on 24th July 1952 for 3 hours from 12-00 p.m. to 3-00 p.m., discharge over waste weir being 62,246 cuses with depth over crest of 7.90 feet. The Mutha Right Bank Canal was closed by compartments 8 times during the year under report for clearance of weeds and silt.

SUPPLY IN THE MATOBA TANK

On 15th February 1952, the level in the tank was nil with no contents. It began to be replenished from the Mutha Right Bank Canal from 7th July 1952 when the level in the tank was 9.95 feet with corresponding contents 5 million cubic feet. The highest level recorded on 29th September 1952 was 29 feet and contents being 184 million cubic feet. On 15th October 1952, the level was 28.65 feet and contents 177 million cubic feet. In rabi season this tank dried completely on 28th December 1952.

The following table gives the result of irrigation revenue areas etc. during the year under report as compared with the average of the past three years on the Mutha Canals-including Matoba Tank :—

Area irrigated.		Assessment.	
1952-53.	Average.	1952-53.	Average.
Acres.	Acres.	Rs.	Rs.
14,167—9	19,155—2	2,36,960—6	2,25,065—1

Average rainfall in canal tract.		Realisations.	
1952-53.	Average.	1952-53	Average.
Inches.	Inches.	Rs.	Rs.
31.76	28.57	8,02,451	5,93,389

The decrease in the area irrigated during the year is due to Bhusar crops in Rabi season having not been granted on account of unsatisfactory storage condition. The increase in the assessment when compared with the average is due to the increased water rates of both, authorised and unauthorised crops sanctioned as per Notice No. 6 of 1950 of the Executive Engineer, Irrigation Development Division. Since 1942 Canal water is refused to cane and other new perennials to meet the demand of water for non-irrigational purposes and to encourage the food and fodder crops.

The following table shows the areas sanctioned and assessment charged :—

Canal.	Pazar where Government has incurred expenditure.				Pazar where Government has incurred no expenditure.			
	Authorised.		Unauthorised.		Authorised.		Unauthorised.	
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
Mutha Canals including Matoba Tank.	178-15	8,272-9	23-17	891-9	197-8	84-5	167-29	8,318-7

The area under different kinds of blocks during the year under report was as under, as compared with the figures of the previous year :—

Particulars.	Mutha Canals.		Matoba Tank.	
	1951-52.	1952-53.	1951-52.	1952-53.
	Acres.	Acres.	Acres.	Acres.
Fruit blocks	201 7	181 0	.....	.....
Two seasonal blocks	485 35	442 0	1519 89	1630 0

Due to insufficient supply of canal water, sugarcane blocks have not been introduced on Mutha Canals. So also garden blocks were not renewed after 15th February 1953 for the above mentioned reason. Out of the sanctioned block area, the areas held by tenants and owners are given in the following statement :—

Particulars.	Mutha Canals.				Matoba Tank.			
	Owners.		Tenants.		Owners.		Tenants.	
	Number	Area.	Number.	Area.	Number.	Area.	Number.	Area.
		Acres.		Acres.		Acres.		Acres.
1. Fruit Block ..	74	177 18	6	11 14	..	..	..	..
2. Two Seasonal block ..	153	417 31	7	17 4	844	1,209 5	47	210 8

The area of sugar cane during the year under report was 5 acres and 38 Gunthas on the Canal proper and is of Government institutions maintained both for experimental and educational purposes.

During the year under report, the total amount of remission granted was Rs. 20,918-6-0. The irrigators had applied for their crops on pazar and their cases were decided by the Government leniently.

Cost of measuring establishment for measuring irrigated areas during the year under report was Rs. 0-1-9 per acre against Rs. 0-1-11 per acre of the previous year. The total area measured was 13811-31 acres.

Canal water was supplied for drinking and domestic purposes to Poona City, Cantonment, etc. during the year as shown below, compared with the figures of the previous year :—

Name.	1951-52	1952-53
	Million Gallons.	Million G.P. ns.
Poona Municipal Corporation	... 4,030	4,140
Government Water Work for Cantonment (Poona Water Work)	... 3,954	2,471
Kirkee Water Supply	... 659	654
1940 Kirkee Water Works	... 610	857
Total	... 9,253	8,122

EFFLUENT IRRIGATION ON THE MUTHA RIGHT BANK CANAL

The total area of sugar cane during the year under report was 5 acres against 6 acres 15 gunthas of the previous year. The average discharge of effluent pumped during the year under report was 15-20 day/cusecs against 14-62 day/cusecs of the previous year. The whole discharge was utilised for irrigation.

WINTER DISPOSAL AREA

Out of the total area of 227 acres, an area of about 112 acres of land suitable for cultivation of Kharif (food and fodder) crops has been leased out for a period ending 20th June 1953 to Sarvodaya Collective Farming Co-operative Society, Mundhwa. Further extension of lease period is under consideration of Government.

MANJRI DRAINAGE AREA

All the area fully reclaimed, has been leased out for cultivation with effect from 1st April 1948 for a period of 10 years to Subhash Samudayik Sahakari Shetki Sangh, Manjri at nominal rental of Rs. 21 per acre. This rate has been increased to Rs. 35 per acre per year for seven years from 1951 as the Sangh is allowed to grow cane crop.

The cost of maintenance and repairs to the whole Canal system during the year under report amounted to Rs. 62,016 against Rs. 72,704 in the previous year.

MATOBA TANK

The detailed information is given below :—

(a) F. S. L. depth and contents in million cubic feet, 29 feet and designed content 229 million cubic feet.

(b) Silt deposit and contents 9.5 feet and 45 million cubic feet.

(c) Available capacity in million cubic feet for irrigation 184 million cubic feet.

(d) Total replenishment received during the year 1952-53—265.13 million cubic feet.

(e) Million cubic feet consumed during the year :—

Kharif	92 million cubic feet	Rabi	156.58 million cubic feet.
Hot weather—	Nil	Evaporation	27.12

(f) Date on which the maximum height reached—24th September 1952.

(g) Period of waste weir flow and million cubic feet—14 hours on 24th September 1952 and 24 hours on 7th October 1952.

(h) Date on which the lowest level reached—27th December 1952.

(i) Date on which the tank went dry—28th December 1952.

(j) Period of dryness—28th December 1952 to 12th June 1953.

(k) Area of irrigation :—

	Kharif.		Rabi.		Hot-weather.	
	Acres.		Acres.		Acres.	
(i) Cane	61	21	11	22	.....	.....
(ii) 8 months	628	17	880	31	.....	.....
(iii) Seasonals	262	27	719	33	.....	.....
Total	952	25	1612	6	.....	.....

(l) Proportion of perennial crop 8 months crop and seasonal on the total :—

(i) Perennial	...	73	3	3 per cent.
(ii) 8 months	...	882	0	47 per cent.
(iii) Seasonals	...	982	20	50 per cent.

(m) Water rate assessed during the year compared with the average of last three years :—

		Rs.	a.	p.
(i) Total assessment of the year	...	36,838	3	0
(ii) Average of the last three years	...	34,851	5	0

NIRA RIGHT BANK CANAL DIVISION

(NIRA RIGHT BANK CANAL)

The Nira Right Bank Canal is the biggest canal in the Deccan. The designed discharge of the canal at head and tail are 1,500 and 414 cusecs respectively, the corresponding full supply depths are 8.5 feet and 6.5 feet respectively. The main canal is 106½ miles long. There are three Branches, I, II and III, taking off from the canal, in addition to 70 distributaries of varying capacities. The jurisdiction of the Nira Right Bank Canal Division extends up to Mile No. 100 of the Canal, with Branches I and II and 69 distributaries. The tail portion of the canal and branch III are in charge of the Sholapur Division. Water was first supplied from the canal for irrigation of Rabi crops in 1924-25.

The Nira Right Bank Canal draws its supply from the Lake Whiting at Bhatgar. The head works of the canal are at the Pick-up-weir at Vir, 17 miles below the Bhatgar Dam. The Canal was designed for a full supply discharge of 1,500 cusecs at head, but on account of the very slow development of irrigation on the canal since it came into operation, the demand being much less than the supply available, the canal was not being run to its full capacity. In course of time the canal got somewhat silted up. When the demand for larger supplies grew, it was found that the canal could not carry more than about 1,100 cusecs or so with safety. It was therefore proposed to remodel the first 50 miles of the canal so as to increase its carrying capacity, by raising the banks, increasing the heights of gravity walls of aqueducts wherever necessary etc. and a project costing Rs. 15 lakhs was sanctioned in 1947 and work was started almost immediately. The work has been completed during 1952-53. The canal was tested for a discharge of 1,400 cusecs during the year and it has since been made safe for a discharge of 1,500 cusecs.

The Nira Right Bank Canal irrigates lands in the Phaltan Taluka of North Satara District and parts of Malsiras, Pandharpur and Sangola Talukas of the Sholapur District. The Canal is perennial up to mile No. 77 including Branch I and distributaries 1 to 64. The portion below mile No. 77 is non-perennial and receives water only during the monsoon and rabi seasons. In the monsoon season only the portion beyond mile 100 receives water made available from the surplus flow in the Nira River. The cultivable area under command of the whole canal is 4,80,000 acres. The canal is provided with modern types of regulating arrangements,

standing wave flume measuring devices, venturi-meters, level recorders, etc. for ensuring proper regulation and control of water for irrigation purposes. The rainfall in the irrigated area of the canal during the year under report was very poor, being only 11 inches as against the average of 19 inches of the previous three years. On account of the poor monsoon, the demand for irrigation water was very great.

Pre-seasonal waterings were not permitted to monsoon crops. In the monsoon season, the demand for monsoon food crops was fully met. Permission for Adkali overlap was granted in the Kharif season to the extent of 50 per cent. of the sanctioned cane and vegetables to the extent of 168 acres 20 gunthas were allowed.

The condition of storage in the Bhatgar lake was not very satisfactory and in order to meet the demand for Rabi food crops, the overlap cane plantation during the Rabi season had to be refused. The area of Rabi crops sanctioned outside blocks was 19,165 acres as against the average of 22,000 acres irrigated in normal years.

The figures of areas under irrigation in blocks of local irrigators were as under :—

Name of Block.	1951-52.	1952-53.	
	A.	A.	R.
Cane blocks 1 : 3	5,640	5,677	20
Fruit and Garden blocks	132	130	20
Two seasonal Food and Fodder blocks.	18,889	18,566	00

In addition to the above, four sugar factories and other industrial concerns were supplied with water to their guaranteed area of sugar cane to the extent of 8,800 acres.

The following table gives the total revenue and areas under irrigation during the year under report as compared with the averages of the past three years :—

Particulars.	Nira Right Bank Canal.	
	1952-1953.	Average.
Area irrigated in acres	70,814	83,449
Water rates assessed	Rs. 19,46,674	15,99,088
Gross assessed revenue from all sources.	Rs. 20,18,557	16,42,766
Realisations	Rs. 20,37,995	14,39,941
Rainfall in inches	11-00	19-00

As compared with the average of the past three years, the irrigated area shows reduction due to the restricted sanction to Rabi crops. Remission amounting to Rs. 6,791 was sanctioned during the year under report. The cost of measuring establishment during the year under report, worked out to 18 pies per acre on the Nira Right Bank Canal, the corresponding figure for the previous year was 18 pies per-acre.

The following statement shows the details as to how the figures of cost of measurement of crops have been arrived at:—

Name of the Canal.	Area measured in acres.	Cost of measuring in Rs.
Nira Right Bank Canal.	79,163	7,678

NASIK IRRIGATION DIVISION

GODAVARI CANALS

This is one of the major irrigation works undertaken in the Deccan for the protection of areas liable to famine. It was started in 1907 and completed in 1915-16 at a cost of about one crore of rupees. This system comprises of:—

(a) A storage reservoir (Lake Beale) on the Darna River, a tributary of the Godavari, situated about 20 miles from Nasik;

(b) A pick-up weir at Nandur Madhmeshwar on the Godavari, 47 miles below the Darna Dam which diverts into the Canals, the water let down from the storage reservoir at Lake Beale; and

(c) Two canals of which the Right Bank Canal, 69 miles long, which serves a part of Nasik District and the northern tracts of the Ahmednagar District and the Left Bank Canal, 48 miles long which irrigates lands north of the Godavari in the Nasik and Ahmednagar Districts.

The length of the Darna Dam (inclusive of its water weir) is 5,360 feet and the dam has a maximum height of 92 feet above its lowest foundation level. The lake has a storage capacity of 7,763 million cubic feet and the catchment area is 156 square miles. The weir at Nandur Madhmeshwar is 3618 feet long inclusive of the Right and Left Bank Canal regulators. The weir has a maximum height of 34 feet above the level of the river bed. Scouring sluices have been constructed close to the head regulators of the two canals with the object of keeping the approach channels to the latter, clear of silt. The total area under the command of the canal is 2,32,390 acres. The two canals (Right and Left) are designed for a discharge of 384 and 228 cusecs at their heads, respectively, with full supply depth of 7 feet and 6 feet, respectively.

On 1st April 1952, the level of the water in the Lake was 57.95 feet, contents being 3,258 million cubic feet. The lowest level of 30.15 feet was reached on 8th June 1952, contents being 605 million cubic feet when the replenishment began to be received. The lake did not fill to its full capacity of 75 feet depth. The highest level reached, was 71.7 feet, contents being 6,668 million cubic feet and the draw off commenced on 29th October 1952. There was also failure of post monsoon rains in the irrigated tracts, in consequence of which, the demand for water to Rabi crops was high. In order to meet this position of precarious supply and heavy demand, the sugar companies and others taking water on volumetric basis, were

supplied water with 22 per cent. reduction in their normal quota, and 40 per cent. cut was applied to the areas of cane in and outside blocks.

The perennial limit of Godavari Right Bank Canal is up to its mile 69 and that of Godavari Left Bank Canal, up to mile 44/4 (temporarily extended to mile 48). The average rainfall in the catchment area of the laks was 80.98 inches against 78.85 inches of the last year.

The following table gives the figures of area irrigated, revenue assessed etc. during the year under report as compared with the corresponding averages of the past three years :—

Name of work.	Area irrigated.		Water rate assessed.		Gross assessed revenue.	
	1952-53.	Average.	1952-53.	Average.	1952-53.	Average.
	Acres.	Acrs.	Rs.	Rs.	Rs.	Rs.
Lake Beale	.....	.....	.....	.....	.....	.....
Godavari Right Bank Canal.	32,185	31,513	8,37,682	6,27,636	15,63,258	11,61,121
Godavari Left Bank Canal.	26,491	25,662	6,96,053	5,06,362		

Name of work.	Realisations.		Rainfall.	
	1952-53.	Average.	1952-53.	Average.
	Rs.	Rs.	Inches.	Inches.
Lake Beale	.....	.....	80.98	88.59
Godavari Right Bank Canal	17,06,766	9,82,760	12.25	19.13
Godavari Left Bank Canal			10.60	22.60

The increase in the area irrigated and water rate assessed was due to heavy demand for Rabi food and fodder crops and increase in assessment was due to enhanced water rates and unauthorised irrigation practised. The areas under sugar cane was 8,688 acres (exclusive of overlap of 410 acres). The cost of measuring establishment was Re. 0-1-7 per acre against Re. 0-1-4 per acre of last year. Total remission sanctioned during the year under report amounted to Rs. 6,466. The expenditure incurred on maintenance and repairs on Canals amounted to Rs. 60,429 against Rs. 62,414 of the last year.

CHANKAPUR TANK—GIRNA CANAL

This is comparatively a small irrigation system situated in the Nasik District having its storage reservoir at Chankapur fed by waters from a catchment of 100 square miles in extent and its pick-up-weir at Then-goda situated 23 miles down stream of the dam from which weir, the Girna Left Bank Canal (19 miles in length) takes off. The dam is constructed across the Girna River, a tributary of the Tapti and has been formed by the construction of a masonry dam 140 feet high which impounds 1550 million cubic feet of water. The dam and the canal (up to mile 13) were completed in 1909-10 and the canal has been in operation since then. The extension of this canal designed to carry about 40 cusecs up to mile 19 was completed in 1920-21. The designed discharge of the canal at its head was 90 cusecs and its tail 15 cusecs, the corresponding full supply depth being $4\frac{1}{2}$ feet and 2 feet respectively. The canal has been now remodelled to increase discharge of 155 cusecs at head and 43 cusecs at tail. The pick-up-weir at Thengoda was raised by 15 inches increasing the head in order to force water more efficiently into the canal. The total area under command of the canal is 29,182 acres and the irrigable area is 8,500 acres.

On 1st April 1952, the level of the water in the tank was 60.6 feet, the corresponding contents being 425 million cubic feet. The lowest level of 38.25 feet was reached on 8th June 1952, the corresponding contents being 15 million cubic feet, when the tank began to receive replenishment. The draw-off for irrigation purposes commenced on 3rd October 1952 with a gauge at 91.3 feet, corresponding contents being 1503 million cubic feet.

The following table gives the figures of areas irrigated, revenue assessed, etc. during the year under report as compared with the averages of the past three years :—

Area irrigated.		Water rate assessed.		Gross revenue assessed.	
1952-53.	Average.	1952-53.	Average.	1952-53.	Average.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
18,370	20,268	3,22,060	2,95,799	3,34,520	3,08,416
Realisations.			Rainfall.		
1952-53.	Average.	1952-53.	Average.	1952-53.	Average.
Rs.	Rs.	Inches.	Inches.	Inches.	Inches.
3,17,952	2,42,515	16.37	22.92		

The decrease in the area irrigated was due to failure of late rains in Rabi season of 1952-53 and precarious storage condition. Drastic cut in areas was therefore applied. Increase in water-rates assessed was due to enhanced water rates. The area of 1 : 3 sugar cane blocks during the year under report was 2431-20 acres. The sanctioned area under Two-seasonal Block was 8 acres. The cost of measuring establishment was Rs. 0-1-2 per acre as compared with the last year's Re. 0-1-6 per acre. The total remission sanctioned during the year under report amounted to Rs. 3,180. The expenditure incurred on maintenance and repairs to canal amounted to Rs. 10,863 against the expenditure of Rs. 12,640 for the last year.

KADWA CANALS SYSTEM

These works which came into operation in 1868-69 consist of a fank at Waghad and 3 small canals viz. the Palkhed, the Ozar-Tambat and the Wadali, taking off from the weir constructed across the Kadwa River and the other across its tributary, the Banganga. The system comprises of 38 miles of canals and distributaries. The storage reservoir is at Waghad (a ghat-fed storage) situated on Kalwan River in the Nasik District.

The catchment of the tank is 29-09 miles in extent. The tank is remarkable because of the size of its earthen dam, which has a maximum height of 96 feet. The designed discharges of the Palkhed Canal at its head and its tail are 63 cusecs and 15 cusecs respectively, the corresponding depth at full supply being 3½ feet and 2 feet respectively. The designed discharges of the Ozar-Tambat Canal at its head and tail are 33 cusecs and 5 cusecs respectively, the depth at full supply being 3½ feet and 2 feet, respectively. The designed discharges of the Wadali Canal at its head and tail are 19 cusecs and 5 cusecs, respectively and the depth at full supply being 2 feet and 1 foot respectively.

On 1st April 1952, the level of water in the Waghad Tank was 34.7 feet, corresponding contents being 275 million cubic feet. The lowest depth viz. 15.9 feet was reached on 11th June 1952 with corresponding contents of 55 million cubic feet, when the tank began to receive replenishment. The draw-off for irrigational purposes commenced on 15th October 1952 with the water level at 45.0 feet and the corresponding contents being 511 million cubic feet.

The following table gives the figures of area irrigated, revenue assessed etc. during the year as compared with the average of the past three years :—

Name of work.	Area irrigated.		Water rate assessed.		Gross revenue assessed.	
	1952-53.	Average.	1952-53.	Average.	1952-53.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Palkhed Canal ...	1,781	2,460	43,138	51,608	1,23,350	1,21,932
Ozar Tambat Canal.	1,274	1,597	45,017	39,497		
Wadali Canal ...	1,324	1,181	28,272	23,614		

Name of work.	Realisations.		Rainfall.	
	1952-53.	Average.	1952-53.	Average.
	Rs.	Rs.	Inches.	Inches.
Palkhed Canal	29.23	30.94
Ozar-Tambat Canal	18.26	25.42
Wadali Canal	12.45	27.02

The decrease in the area irrigated was due to failure of late rains in Rabi season of 1952-53 and precarious storage condition. The area of Two-seasonal Blocks was 50 acres. The expenditure incurred on maintenance and repairs amounted to Rs. 6,364 against the expenditure of Rs. 5,298 for the last year. The cost incurred on measuring establishment was Re. 0-1-5 per acre against Re. 0-1-8 per acre of the last year. No remissions were sanctioned during the year under report.

PARSUL TANK

The system comprises of the earthen reservoir 2,270 feet in length and 62.37 feet high and having useful capacity of 113.5 million cubic feet above lowest sluice, across Parsul River. It has a pick-up-weir (pucca Bandhara) at Umaranna and Soundana villages and the three channels namely Umarana Left Bank, Umarana Right Bank and Soundana Right Bank Channels. The last two channels take off from the pick-up-weir (Bandharas) whereas the Umarana Left Bank channel takes off direct from the tank.

The gauge and water contents in the tank on 1st April 1952 and 31st March 1953 were as under :—

Date	Gauge reading
1st April 1952.	Tank was dry from 1st February 1952.
31st March 1953.	Tank emptied on 22nd November 1952.

The first replenishment was received on 7th June 1952 and the tank emptied on 31st June 1952. Second replenishment was received on 17th July 1952. The tank filled upto R. L. 1871.98 only on 15th August 1952 against full supply level 1876.36. The first draw-off for irrigational purposes commenced on 15th August 1952 with a discharge of 7.33 cusecs. The total rainfall in the catchment at the two stations viz. Nandurtek and Umarana was 7.42 inches and 7.45 inches respectively. The rainfall during the year worked out to 7.43 inches against 12.07 inches of the last year.

The figures of area irrigated and revenue assessed for the year under report as compared with the averages of the last three years are as under :—

Name of Tank.	Area irrigated.		Water rate assessed.		Gross revenue assessed.	
	1952-53.	Average.	1952-53	Average.	1952-53.	Average.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
Parsul Tank	1,255	2,141	6,344	10,959	6,346	11,505

Name of Tank.	Realisations.		Rainfall.	
	1952-53.	Average.	1952-53.	Average.
	Rs.	Rs.	Inches.	Inches.
Parsul Tank	6,034	10,168	7.43	18.30

The decrease in area irrigated and revenue assessed was due to failure of late rains in Rabi season of 1952-53. The expenditure incurred on maintenance and repairs amounted to Rs. 866 against the expenditure of Rs. 2,156 for the last year.

AHMEDNAGAR DIVISION

PRAVARA RIVER WORKS

The canal system which was constructed at a cost of Rs. 1½ crores comprises of the following :—

(a) The Wilson Dam at Bhandardara on the Pravara river. This work impounds the water of the lake Arthur Hill and is one of the highest dams in India having a height of 282 feet. It is 1,600 feet in length and the lake formed by the dam has a storage capacity of 11,189 million cubic feet.

(b) A pick-up-weir 890 feet long, situated at Ozar, 53 miles downstream from the Lake Arthur Hill and about 8 miles to the east of Sangamner.

(c) Two canals, viz, the Pravara Right Bank Canal, 33 miles and the Pravara Left Bank Canal, 48 miles long, take off at weir at Ozar.

These canals irrigate lands in the Ahmednagar District and command an area of 2,28,729 acres. The designed discharges of the two canals (Pravara Right Bank Canal and Pravara Left Bank Canal) at head are 152 and 530 cusecs, respectively, the corresponding full supply depths being 5 feet and 9 feet respectively. The work of remodelling the first 16½ miles of the Pravara Left Bank Canal and the Northern Branch has been completed in order to meet the increased demand for water to the sugar factories established on the Pravara Left Bank Canal. Due to the remodelling the Pravara Left Bank Canal and rotational running now practised, weeds do not appear at present. The Ozar weir was raised by 2 feet in order to obtain the necessary supplies in the two canals. The height of the waste weir at Bhandardara was raised by 5·7 feet by constructing a crest wall. The construction of the Wilson Dam which impounds the water of Lake Arthur Hill was commenced in 1911 and completed in 1926. The catchment area of the Lake is 47 square miles; it is situated in the Ghats and has an assured run-off. The dam is designed to impound a maximum depth of water of 270 feet and is constructed across a gorge in the valley of the Pravara River. At present water is impounded to a depth of 265·70 feet having a storage of 11,189 million cubic feet.

On 1st April 1952, the level of the water in the Lake was 216·25 feet, the corresponding contents being 4419 million cubic feet. The lowest level reached was 150·60 feet on 21st June 1952, the corresponding contents being 950 million cubic feet. Replenishment commenced from 22nd June 1952 and the full supply level of 265·70 feet was reached on 26th July 1952, the contents being 11,189 million cubic feet. The maximum flood occurred on 27th July 1952 when the level was 267·40 feet with contents 11537 million cubic feet and lasted for about 12 hours. The draw off for the irrigational purposes commenced from 8th September 1952 when the water level in the Lake finally began to fall below 265·60 feet. The level of water gradually fell to 222·90 feet on 15th February 1953 i.e. at the beginning of the hot-weather season, the contents being 5042 million cubic feet. The Level of water on 31st March 1953 was 205·50 feet, the corresponding contents being 3559 million cubic feet. The yield from the catchment (47 square miles) of the lake was 20273 million cubic feet while the average rainfall of the two rain gauge stations at Bhatgar and Bhandardara was 159·73 inches against 141·63 inches of the previous year.

Due to the absence of late monsoon rains in the catchment upstream of Ozar Weir, the river gains were about 400 million cubic feet less than what are normally anticipated. Besides, there was practically no showers of October-November rains, in the irrigated tract, due to which unauthorised irrigation of Rabi was expected to be more than usual. A further deficit of about 250 million cubic feet had thus to be taken into account. To meet these contingencies, a cut of 25 per cent. to new plantation of sugarcane growers (having more than 1½ acres cane sanctions), and also a 15 per cent. overall cut in the quota of water in the case of Sugar Companies and others taking water on volumetric basis, was applied as per Government Letter No. NS 109/3224 I, dated the 15th January 1953.

The following table gives the figures of area irrigated and revenue assessed etc. during the year 1952-53 as compared with the average of the past three years :—

Name of work.	Area irrigated.		Water rates assessed.	
	1952-53.	Average.	1952-53.	Average.
1	2	3	4	5
	Acre.	Acre.	Rs.	Rs.
Pravara Right Bank Canal	19,630	22,451	5,02,606	3,27,445
Pravara Left Bank Canal	69,523	59,362	20,08,879	11,17,725

Name of work.	Gross revenue assessed.		Realisations.		Rainfall.	
	1952-53.	Average.	1952-53.	Average.	1952-53.	Average.
1	6	7	8	9	10	11
	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
Pravara Right Bank Canal.	5,15,293	3,34,476	17,42,781	2,91,264	8.24	20.87
Pravara Left Bank Canal.	20,38,691	11,24,049		10,29,345	12.61	24.41

The total increase in the area irrigated in Pravara Canals was due to increased demand on account of failure of rains in the canal tract. The total area of the sugarcane blocks was 3431 acres on Pravara Right Bank Canal (Owners 2245 acres and tenants 1186 acres) and 3954 acres on Pravara Left Bank Canal (Owner 2596 acres and tenants 1358 acres), while the area under two-seasonal blocks was 4648 acres. The remission sanctioned during the year under report amounted to Rs. 17,594-0-0. The cost of measuring establishment was Re. 0-1-3 per acre as compared with Re. 0-1-9 per acre of the previous year. The expenditure incurred on maintenance and repairs amounted to Rs. 1,15,638 against the expenditure of Rs. 1,29,501 of the last year.

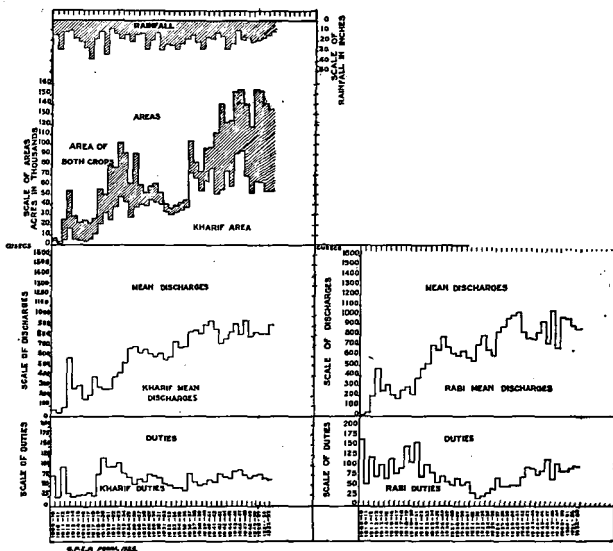
The area irrigated under cane on lift on river and nallas during the year under report was as under :—

Name of the Canal	Canal on river and nalla lift.	Ford and Fodder crops on nalla.
	Acres	Acres.
1. Paravara Right Bank Canal	290-00	93-00
2. Paravara Left Bank Canal	870-00	553-00

**AHMEDNAGAR DIVISION
GODAVARI AND PRAVARA CANALS.
COMBINED WORKING RECORD
FOR THE YEAR 1952-53.**

DR. NR 24 OF 1950.

- NOTE—
- (1) THE INTERCEPTS IN THE RED AREA SHOW THE RABI AREAS EACH YEAR.
 - (2) THE AREAS SHOWN EXCLUDE THOSE OF THE LASH CHANNEL. TILL IT WAS AMALGAMATED WITH THE PRAVARA LEFT BANK CANAL IN 1925-26.
 - (3) THE DISCHARGES ARE AVERAGE DISCHARGES AT HEAD CALCULATED ON THE TOTAL NUMBER OF DAYS OF THE SEASON CONCERNED.
 - (4) THE DUTIES ARE CALCULATED ON THE ABOVE AREAS AND DISCHARGES.
 - (5) THE RAINFALL IS AVERAGE RAINFALL OF ALL THE STATIONS ON THE CANALS.
 - (6) THE DISCHARGES AND DUTIES FOR KHARIF AND RABI 1912-13 ARE FOR GODAVARI R.B. CANAL AND PRAVARA CANALS ONLY. FIGURES FOR GODAVARI L.B. CANAL ARE NOT AVAILABLE.



[Signature]
EXECUTIVE ENGINEER
AHMEDNAGAR DIVISION

On Pravara Left Bank Canal, a new sugar factory on co-operative lines at Loni on distributory Nos. 1 to 3 and water course Nos. 1 to 23 and water course Nos. 7 to 29 of the Paravara Right Bank Canal has been permitted by Government *vide* Government Letter, Public Works Department, No. 8041/36-II-I(B)(I), dated the 14th December 1948. The factory as such has not been given any canal water but its members hold cane sanctions in their individual capacity.

BHATODI TANK

This is a small tank on the Mehakari River about 12 miles from Ahmednagar. It depends entirely on local rains for its supply. Due to silting the storage capacity of the tank has been reduced from 154 million cubic feet to about 40 million cubic feet. The first replenishment was received on 7th June 1952 which raised the water level to 22.50 feet.

The following table gives the figures of area irrigated and revenue assessed etc. during the year as compared with the average of the past three years :—

Name of the work.	Area irrigated.		Water rates assessed.	
	1952-53.	Average.	1952-53.	Average.
1	2	3	4	5
	Acres.	Acres.	Acres.	Acres.
Bhatodi Tank	415	781	2,327	445

Name of the work.	Gross revenue assessed.		Realisations.		Rainfall.	
	1952-53	Average.	1952-53.	Average.	1952-53.	Average.
1	6	7	8	9	10	11
	Rs.	Rs.	Rs.	Rs.	Inches	Inches
Bhatodi Tank	3,387	6,908	4,489	4,030	11.20	23.64

The decrease in area and revenue was due to unfavourable conditions of storage and hence less area was sanctioned for seasonal crops. Due to uncertainty of supply, two seasonal blocks were not sanctioned on this tank. No remissions were sanctioned during the year under report. The expenditure incurred on maintenance and repairs amounted to Rs. 1,478.

GANGAPUR STORAGE DIVISION, NASIK

GANGAPUR STORAGE PROJECT.

This scheme for a storage on the river Godavari has been under consideration since 1910. Originally it was meant to be a storage for the existing Godavari Canals. Subsequently a storage at Darna was constructed for these canals. In 1924, again investigations were carried out on Godavari for an additional storage for the same canals. The proposal was, however, shelved due to financial stringency in 1931. Finally Government sanctioned the project of constructing a dam across the river Godavari about 8 miles to the West of Nasik and just below the confluence of the river Godavari and Kashyapi under Government Resolution, Public Works Department, No. 6875/36-I, dated the 19th January 1949. Government directed that as far as possible new lands should be brought under irrigation under this water.

The dam will be an all earthen structure about 12,500 feet long and 120 feet high above the river bed or 140 feet above the foundation at its deepest. It will contain 140 million cubic feet of earth-work and will store 5500 million cubic feet of water with open waste weir and 7200 million cubic feet in the second stage when waste weir gates are installed. The construction of the dam began in February 1949 with only a skeleton of earth moving machinery. Most of the earth moving machinery was received by November 1949. The equipment consists principally of 17 motor scrapers, 6 motor wagons, 24 Tractors and 3 Excavators. A great difficulty was experienced in the beginning as trained personnel was not available for operating and maintenance of the machinery. Staff had to be trained on the job. The situation, however, improved as more and more men got trained on the work. The target date for completing the work is June 1956.

The construction of the earthen dam was influenced not only by the consideration of cheaper cost but also by the ease of construction and the availability of labour. If the dam was constructed in masonry, it would have required a strength of over 5,000 people, but due to the mechanised construction which is possible with earth work is going on with a strength of about 1,000 people only. It is very difficult to get labour locally. This has solved the difficult problem of handling and housing large number of labour at one place due to the use of machinery.

Almost all the land acquisition work has been finished but some disputed cases are still in the Court of Law. A Soil Mechanics Laboratory is established at the dam site for study of the soils to be used for the dam from local borrow pits and for effective control of the specifications. A well equipped workshop is set up on the job to look after most of the heavy repairs of the machinery and to manufacture such spare parts as are not easily available in the country. A good stock of spares was collected during the year so that the breakdowns of the machinery would be reduced to a minimum. A construction town of modest size is set up on the job to house the construction staff. The town is laid out for a population of 500 families. It is provided with water supply, electricity, drainage, medical hospital, school, post office and a recreation centre.

The work of excavation of temporary waste weir was completed and floods of 1952 monsoon were diverted through the channel of the temporary waste weir. The work of excavation of permanent waste weir with approach and tail channel for the first stage was in progress. The bank work in the river gorge was raised up to R.L.1970. The cut off trench together with grouting was completed except for a small stretch near the Left Bank Outlet on the Left Flank. The embankment work of 'C' and 'D' Sections was in progress. The total earth work executed during the year was 43 million cubic feet. The total earth work completed by the end of the year was 115 million cubic feet out of a total of 157 million cubic feet. The work of the rock blanket, metal base, rocky toe on down-stream side was in progress. The foundation work of Right Bank Outlet was completed and of Left Bank Outlet was in progress. The foundation work of bridge across Godavari was completed and the work of piers was in progress. The expenditure on the Dam during the year was Rs. 47,83,765-15-1 and the total up-to-date expenditure on the Project was Rs. 1,98,77,472. The revised proposals for utilisation of water on the canals were under consideration of Government.

CENTRAL CIRCLE

WEST KHANDESH DIVISION

SHAHADA CHANNEL

The Shahada channel is fed by the river Gomai, which has a perennial flow. The rainfall gauged at Shahada was 17.44 inches against 24.88 inches which is the average of the last three years. There was normal water in the Gomai river to meet the demand.

LOWER PANZRA RIVER WORKS

The works comprise of 8 bandharas and 9 channels between Dhulia and Betawad on the Panzra river, supplemented by water from Mukti tank, situated 4 miles to the South West of Dhulia City. The tank is under control of the Public Works Department in all respects, but in the case of bandharas and channels, the Public Works Department carries out repairs only as required. The channels get their supply from the river which is supplemented by water from Mukti tank. The rainfall gauged within the catchment of the tank at Dahyane and Sadgaon during the year under report was 5.27 inches against 15.27 inches which is the average of the last three years.

On 1st April, 1952, the contents of the tank were 150.194 million cubic feet which gradually diminished to 4.806 million cubic feet before the first replenishment was received on 13th June, 1952. The maximum storage reached was 66.116 million cubic feet on 20th June 1952. The year closed with a storage of 31.215 million cubic feet.

The area irrigated and the gross assessed revenue in respect of two irrigation works mentioned below, as compared with the average of the preceding three years are given below :—

Name of work.	Area irrigated.		Gross assessed revenue.	
	1952-53.	Average.	1952-53.	Average.
	2	3	4	5
<i>Shahada Channel.</i>				
	Acres.	Acres.	Rs.	Rs.
Pathaethal	1014	.....	.....	.....
Jirayat	2164	.....	.....	.....
Total	3178	8468	37,124	20,867
<i>Lower Pansra River works.</i>				
Pathaethal	1276	.....	.....	.....
Jirayat	1700	.....	.....	.....
Total	2976	4151	35,791	37,807

EAST KHANDESH DIVISION

JAMDA CANALS

These canals receive their supply from the Girna river. The rainfall during the year under report was 8.6 inches against 25 inches which is the average of the past three years.

MHASWA TANK

The tank derives its supply from local rains in the catchment area. The rainfall gauged at the tank was 10.47 inches during the year under report against 22.20 inches which is the average of the past three years. The contents of the reservoir were 26.61 million cubic feet at the time of the beginning of the year i.e. on 15th February 1952 and the same was gradually reduced to Zero on 14th May 1952. The first replenishment was received on 19th June 1952, raising the contents from Zero to 10.51 million cubic feet. The maximum contents of the reservoir were 26.10 million cubic feet on 7th September 1952. The tank became dry on 16th November 1952.

The area irrigated and the gross assessed revenue in respect of the two irrigation works mentioned below as compared with the average of the preceding three years are given below :—

Name of work.	Area irrigated.		Gross assessed revenue.	
	1952-53.	Average.	1952-53.	Average.
	2	3	4	5
	Acres.	Acres.	Rs.	Rs.
Jamda Canals	7277	8078	80,849	62,752
Mhaswa Tank	6	471	17	1,776

SATARA DIVISION

KRISHNA CANAL

The total rainfall gauged at Retre-Budruk which is situated in the centre of the commanded area was 20.99 inches against 23.38 inches which is the average of the past three years. The Krishna Canal takes from the left bank of the Weir built across the river Krishna near the village Khodshi about 2 miles from Karad. There is no tank and no storage capacity with the result that the irrigation depends upon the natural flow of the river during the season. It passes through the boundary of 31 villages in Karad, Walve and Tasgaon Talukas and irrigates land in these villages. The supply of water to this canal mainly depends upon the rainfall at Mahableshwar from where the Krishna river starts. The perennial limit of the canal is extended upto mile number 20.

The designed capacity of the canal is 110 cusecs but due to removal of silt from the canal it can carry a maximum discharge of 120 cusecs.

The expenditure incurred during the year under report for maintenance and repairs to the canal was about Rs. 16,148.

REWADI CANAL

The rainfall gauges at Rewadi which is situated one mile below the river, was 14.90 inches as compared with the average of the past three years. The expenditure incurred during the year under report for maintenance and repairs to the canal was Rs. 1,848.

YERLA RIVER IRRIGATION WORKS

The rainfall gauged at Nehr was 25.82 inches as compared with 22.05 inches, the average of the past three years. The expenditure incurred during the year under report for maintenance and repairs to these works was Rs. 12,778.

UPPER MAN RIVER WORKS.

The rainfall gauged at Pingli was 5.88 inches as compared with the average of the past three years, which was 19.79 inches. The expenditure incurred during the year under report for maintenance and repairs grant to the works was Rs. 5,997.

MAYANI TANK

The rainfall gauged at Mayani was 12.15 inches as compared with the average of the past three years which was 19.75 inches.

The area irrigated and the gross assessed revenue of the irrigation works in Satara Division as compared with the average of the past three years are given below :—

Name of work.	Area irrigated.		Gross assessed revenue.	
	1952-53.	Average.	1952-53.	Average.
	2	3	4	5
	Acres.	Acres.	Rs.	Rs.
Krishna Canal	10640	10936	76,432	75,885
Bewadi Canal	454	940	3,003	5,665
Yerla River Works	4627	5775	33,629	32,328
Upper Man River Works	876	1540	6,583	8,345
Mayani Tank	1412	1686	9,982	9,648

POONA DIVISION

The area irrigated and the gross assessed revenue of the following two irrigation works in the Poona Division as compared with the average of the past three years are given below :—

Name of work.	Area irrigated.		Gross assessed revenue.	
	1952-53.	Average.	1952-53	Average.
	2	3	4	5
	Acres.	Acres.	Rs.	Rs.
Shirsuphal Tank	1333	1865	11,664	18,943
Bhadalwadi Tank	207	1957	2,152	18,668

SHIRSUPHAL TANK

The water level in the tank on 28th February 1952 was 17.50 feet (111.24 million cubic feet) including silt 11.25 feet (20.58 million cubic feet) and hence water for irrigating the Hot Weather crops was given. On the 1st April 1952, water level was 14.90 feet (42.82 million cubic feet). The water level was decreasing day by day till it reached to 12.50 feet (27.52 million cubic feet) on 7th June 1952. First replenishment was received on 8th June 1952, raising the water level to 13.20 feet. The water was gradually increasing due to rains in September and October 1952. The maximum water level of the tank was 25.10 feet (184.32 million cubic feet). After satisfying the demand of Rabi season, little quantity of water was available for Hot Weather crops.

The rainfall gauged at Shirsuphal was 9.10 inches against 16.10 inches which was average of the past three years.

BHADALWADI TANK

There was scanty rainfall i.e. 1.45 inches on the catchment area during the year under report against 12.28 inches which is average of the past three years. In Kharif season the tank was dry. First replenishment was received in tank on 8th October 1952 raising the gauge to 26.00 feet (65.78 million cubic feet) including sill level.

Only one watering to area of 207 acres in Rabi season was given.

SHOLAPUR DIVISION

EKruk TANK

The Ekruk tank is situated about five miles from Sholapur and it has been in operation since 1872-73. It is an artificial reservoir formed by a large embankment 7,000 feet long with a maximum height of 76 feet. The water is supplied mainly to Sholapur City and the mills etc. for non-irrigational purposes and the remaining water being used for irrigation.

On the 1st April 1952, the level of water in the tank was 33.48 feet above still of outlet. The water available in the tank was utilised for irrigation during Hot Weather and Kharif seasons. The first replenishment of 240.95 million cubic feet was received in the tank from 23rd May 1952 to 27th May 1952. A maximum gauge height of water reached on 10th October 1952 was 37.14 feet with contents of water 2053.63 million cubic feet. The total replenishment of 1488.16 million cubic feet was received. Only two waterings were issued for Rabi irrigation after lowering down the level of water by one foot, due to scarcity conditions, as a special case. The area of 1,244 acres during Kharif and 5,517 acres during Rabi season was irrigated. The mean rainfall gauged during the year under report was 14.95 inches against 29.03 inches which is the average of the last three years.

ASHTI TANK

On the 1st April 1952, the tank was dry. The first replenishment of 26.00 million cubic feet was received from 31st May 1952 to 10th June 1952. On 15th June 1952 the gauge was 8.80 feet and contents 99.00 million cubic feet. The water available in tank was utilised for Kharif irrigation in the areas near the head work to give relief to the cultivators from scarcity conditions. The gauge of the tank water on 15th October 1952 was 6.73 with contents of water 41.35 Million Cubic feet available for irrigation. The total replenishment of 177.00 million cubic feet was received in the tank during the year. The available water was used for irrigating 169 acres in Kharif and 1,136 acres in Rabi seasons. Only one watering in general, was given during Rabi to standing jowar crop in order to give benefit of canal water to the maximum area possible as a special case, to give relief to the cultivators from scarcity condition. The mean rainfall gauged was 11.29 inches during the year under report against 25.78 inches which is the average of the past three years.

PATHRI TANK

On the 1st April 1952, the level of water in the tank was 22.15 feet. The first replenishment of 82.50 million cubic feet was received from 23rd May 1952 to 26th May 1952. There were rains from June to October 1952. The total replenishment of 149.76 million cubic feet was received during the year under report and the highest gauge level of the tank was 25.70 feet with contents of 240.01 million cubic feet on 26th May 1952. The water available for irrigation was used for irrigating 138 acres in Kharif and 1,345 acres in Rabi Seasons. The mean rainfall gauged during the year under report was 14.30 inches against 23.86 inches which is the average of the past three years.

MHASWAD TANK

The tank is situated on the eastern border of North Satara district. The tank is formed by an earthen dam across the Man river. The dam is 9,000 feet long and 30 feet high at its highest point. It is provided with a masonry overflow waste weir. The project was commenced in the year 1876-77 and completed in 1888-89. There is only one canal taking off from the left bank of the dam called Mhaswad Canal No. 1. The canal was designed to carry a discharge of 180.7 cusecs where as the present actual discharge is about 146 cusecs. The canal discharges into a small balancing tank at Katphal nine miles below, and the latter is used as a storage reservoir for irrigation purposes. Mhaswad canal No. 2 takes off from Katphal tank and has been designed to carry discharge of 176.93 cusecs with full supply depth of 3.5 feet. The present carrying capacity of the canal is about 100 cusecs.

On the 1st April 1952, the level of water in the tank was 9.95 feet. The first replenishment of 769.72 million cubic feet was received from 17th May 1952 to 15th June 1952. The total replenishment of 1,181 million cubic feet was received during the year. The waste weir of the tank did not overflow. The water available in the tank was utilised for irrigation of 4,866 acres in Kharif and 5,463 acres in Rabi seasons.

Some surplus water of 6831 cusecs was received from the Nira Right Bank Canal during Kharif season, which was utilised for irrigation in the same season. The mean rainfall in the catchment area of the tank was 9.54 inches during the year under report against 20.15 inches which is the average of the past three years.

KARNATAK IRRIGATION CIRCLE

GHATAPRABHA LEFT BANK CANAL DIVISION

GOKAK CANAL 1ST SECTION AND STORAGE WORKS

This canal system is the most important irrigation scheme in the Belgaum Collectorate. It consists of a reservoir formed by a masonry pick-up-weir across the Ghataprabha River at Dhupdal situated at a distance of two miles from the Ghataprabha Railway Station, together with 16.13 miles of main canal and branches and 35.43 miles of distributaries. The total capacity of the reservoir is 1,094 million cubic feet at F.S.L.R.L. 2012.06 of the temporary crest level. The masonry weir is 2,985 feet in length with masonry flank walls and flank embankments on either side. The total area under the command of the canal is 18,668 acres and that of irri-gable command is only 17,627 acres.

The Dhupdal storage reservoir is mainly intended for irrigating the lands under the command of the canal. However, a stipulated quantity of water is issued to the Gokak Mills, Limited, in accordance with an agreement between Government and the Company in consideration of which, a sum of Rs. 14,313 is paid by the Mills to Government, annually, subject to a rebate in the event of the supply falling short of the quantity contracted for. During the year under report, no rebate was allowed for the short supply given which was for the convenience and at the request of the Mills.

Water was supplied to the Southern Railways at the Ghataprabha Railway Station for the use of Railway engines, passengers and the Railway staff at the rate of Rs. 122 per month as per Government Resolution, Public Works Department No. MIP 1158 of 23rd September 1952.

Water was also supplied to the Karnatak Health Institute, for the use of drinking and gardening purposes for the inmates of the institute, at a rate of Rs. 11 only per year as sanctioned by Government.

It is stipulated that no water should be let down for Rabi irrigation after the water level in the storage reaches 23.5 gauge. During the year under report, the water level of the storage dropped down to 23.5 gauge during the third week of January 1953 about a month prior to the closing of the Rabi season, on account of unsatisfactory inflow and rainfall. However, in order to avoid loss to food crops, one special watering to the extent of 350 acres was given after the level had dropped down to 23.5 gauge.

On the 1st April 1952, the gauge reading of the water level in the Dhupdal Lake was 17.24 feet. This level began to fall gradually until it reached 14.85 feet on 20th April 1952. On account of replenishment

on 21st April 1952, the water level rose to 15.35 and the level again reduced to 15.22 feet on 22nd April 1952. From 23rd April 1952, the level continued to rise gradually and it reached 16.40 feet on 25th April 1952. Again from 26th April 1952, it began to drop until 1st June 1952. From the evening of 1st June 1952, the level began to rise day by day till it reached 22.00 feet on 16th June 1952. It was constant up to 24th June 1952. The overflow started from 25th June 1952. The highest flood level observed during the monsoon was 25.70 feet i.e. 3.64 feet above the permanent crest level. The total discharge on that day was 70,010 cusecs.

In order to store water for irrigation during Rabi 1952-53 from the post monsoon floods, the work of the raising the temporary crest was started on 21st October 1952 and was completed on 2nd November 1952 in one instalment only. After completion of the temporary crest, the water level began to rise until it reached 25.40 feet on 15th December 1952. Due to sudden dwindling down of the post monsoon discharge, the level did not reach the F.S.L. 26.06 of the temporary crest level.

During the year under report, sugar cane and long staple cotton were allowed to be grown on the Gokak Canal. There is no cane area guaranteed on the Gokak Canal, to any sugar factory.

GHATAPRABHA LEFT BANK CANAL

The construction of the new irrigation work called the Ghataprabha Left Bank Canal was started in June 1949. The length of the whole canal when constructed will be 44 miles with 2 branches together with 31 miles long. The first eight miles of the canal were completed in June 1951 and were opened for irrigation to monsoon crops on 21st June 1951.

The Ghataprabha Left Bank Canal is also fed by the existing Dhupdal storage reservoir. In fact the alignment of the new Ghataprabha Left Bank Canal coincides with that of the old Gokak canal for a greater part of the first 2½ miles. The old Gokak canal has, therefore, been widened in this section so as to carry the increased new discharge in the Ghataprabha Left Bank Canal.

The first eight miles of the Ghataprabha Left Bank Canal were in operation during the year under report. The total area under the command of the first eight miles excluding the area under the old canal is 1,600 acres, out of which 795 acres were irrigated during the year under report.

The capacity of the Dhupdal storage being limited and stipulated quantity of water being required to be reserved for Gokak Mills, it is not possible to supply any water to the Ghataprabha Left Bank Canal during Rabi season. This canal will, therefore, function only as a monsoon canal, unless and until a larger storage is provided in the upper region of the valley.

During the year under report, the Kharif crops under Ghataprabha Left Bank Canal were not fully matured by the end of the season and so one post seasonal watering was given to the extent of 166 acres. The main crops irrigated under this canal during the year, were jowar, maize, rice, sugar cane and B. G. nuts. All possible concessions were granted to the irrigators to encourage irrigation. There is no cane area guaranteed on the Ghataprabha Left Bank Canal to any sugar factory.

DHARWAR IRRIGATION DIVISION

DHARMA CANAL

The canal gets its supply from the Dharma river and irrigates lands directly and also through a number of small irrigation tanks fed by the canal. The canal started flowing from 22nd July 1952 and ceased to flow by the 8th of November 1952. During the year under report, the rains were satisfactory and timely. Water distribution to all the lands was done without any complaints from the irrigators. The canal discharge during the year under report was more than that of the previous year. This was mainly due to the extension and improvements carried out to the canal. The total commanded and irrigable areas under this Canal are 13,562 acres and 12,870 acres respectively.

ASUNDI TANK

On 1st April 1952 the tank was empty. Due to replenishment in the tank from rainfall on 20th April 1952, the level of water rose to R.L. 103.45 on that day and gradually reached R.L. 103.90. This level remained constant upto 6th May 1952. The water level in the tank further rose to R.L. 104.25 on 15th May 1952, and gradually came down reaching R.L. 103.60 on 12th July 1952, with slight variation in the intervening period. Due to rainfall this level went on rising again and reached R.L. 104.65 on 31st July 1952 and remained steady until 9th August 1952. This was the highest level reached during the year under report. From 10th August 1952, the level went down gradually and reached R.L. 104.00 on 27th September 1952, R.L. 103.00 on 29th December 1952 and R.L. 102.00 on 1st January 1953. Thereafter, the tank became practically empty. The waste weir of the tank also did not overflow during the year under report. This was mainly due to insufficient rainfall during the year. The supply of water from the tank during the year under report was found to be unsatisfactory due to untimely and insufficient rainfall. The requirements of the irrigators could not, therefore, be fully met. The total commanded and irrigable areas under this tank are 1,800 acres and 1,011 acres respectively.

MEDLERI TANK

On 1st April 1952, the water level in the tank was at R.L. 169.05 i.e. 4.05 feet above the sill of the outlet. This level went down gradually and reached R.L. 166.96 on 28th April 1952. On account of rains, this level rose to R.L. 167.70 on 29th April 1952 and upto 176.35 on 8th May 1952. The highest level reached during the year was R.L. 180.50 on 13th October 1952. This level went down gradually and reached R.L. 171.32 on 31st March 1953, with slight variations during the interval. During the year under report the waste weir overflowed from 13th October 1952 to 24th October 1952. The supply of water from the tank was quite satisfactory both during the Kharif and Rabi seasons to meet the requirements of the irrigators. The total commanded area under the tank is 830 acres with an irrigable area of 600 acres.

MADAG TANK

On 1st April 1952, the water level in the tank was at R.L. 1877.46 i.e. 4.21 feet above the sill of the outlet. This level went on falling gradually and reached R.L. 1877.15 on 26th April 1952. The tank received replenishment and the level rose to R.L. 1877.80 on 27th April 1952 and upto 1878.65 till 17th May 1952. On account of rains in the first week of July 1952, the level reached R.L. 1881.95 on 7th October 1952 with slight variations during the interval. R.L. 1881.95 was the highest level of water during the year under report. Thereafter the water level went down gradually and reached 1876.3 on 31st March 1953. During the year, the waste weir overflowed from 27th April 1952 to 31st January 1953. The supply of water from this tank was quite satisfactory both during the Kharif and the Rabi Seasons. The total commanded as well as irrigable area under this tank is 1,345 acres.

MAVINKOP TANK

On 1st April 1952, the water level in the tank was at R.L. 104.92 i.e. 4.92 feet above the sill of the outlet. The waste weir overflowed from 29th July 1952 to 25th August 1952 and from 22nd October 1952 to 25th October 1952 during the year under report. This was mainly due to adequate rainfall. The tank did not become empty during the year, which usually happens in the month of March. The total commanded area under this tank is 755 acres with an irrigable area of 617 acres.

SOUTHERN CIRCLE**BELGAUM DIVISION****GADDIKERI TANK**

The lands under command of this tank are all assessed at consolidated water rates. The area irrigated and the irrigation share of land revenue assessed during the year under report were 423 acres and Rs. 2,344 respectively.

DHARWAR DIVISION**DAMBAL TANK**

On the 1st April 1952, there was no water in the tank as it had dried up in the month of January 1952. The tank received its first replenishment on 24th April 1952 and the water level reached on that day was R.L. 137.30. The water in the tank reached its highest level during the year on 8th October 1952 at R.L. 145.70. The water supply in the tank was adequate for the crops both during the Kharif and Rabi seasons. The water level in the tank on 31st March 1953 was at R.L. 138.95.

Part of the land under this tank is assessed at water rates and the rest at consolidated water rates. The area irrigated (assessed at Water rates) and the assessment thereon were 441 acres and Rs. 2,184 respectively as compared with 380 acres and Rs. 1,191, the average of the past three years. The increase in both the area irrigated and

assessment was due to adequate water in the tank. The area irrigated under consolidated assessment and the irrigation share thereon were 144 acres and Rs. 920 respectively. The total revenue was Rs. 2,609 as compared with Rs. 2,820, the average of the past three years.

BLJAPUR DIVISION

MUCHKUNDI TANK

The storage of water in the tank is uncertain owing to the scarcity and uncertain rainfall in the catchment. The rainfall recorded during the year under report was 19.34 inches. It was little less than the average of the previous three years viz., 24.76 inches. The tank bed was given on lease for cultivation, as an experiment to the Co-operative Joint Farming Society Ltd., Bagalkot, for a period of 10 years, as approved in Government Letter (Public Works Department) No. 5594/36-IB(II), dated 29th April 1949, in pursuance of the Grow More Food Campaign.

The highest level of water during the year under report was at R. L. 1795.34 or 10.14 feet above the sill of the outlet on 21st October 1952 against the highest R. L. 1795.94 or 10.00 feet above the sill of the outlet on 9th October 1951. The lowest water level during the year was at R. L. 1789.50 i.e., 0.06 feet above the sill (silted bed of tank) of the outlet on 28th August 1952. The gross assessed revenue was Rs. 1,470. The tank has silted to some extent and the silted bed level of the tank is R.L. 1789.44.

KOLHAPUR DIVISION

CHIKHALI CANAL

On the 1st April, 1952, there was no flow in the River Nandini from which the canal receives its supply. The first flood occurred on 7th May 1952 and it was 5 feet in depth and lasted for 3 hours only. The highest flood occurred on 10th June 1952 and lasted for 6 hours raising the depth of water to 5 feet.

The total rainfall gaged at Chikhali. was 11.50 inches as against 18.56 inches of the previous year.

SECTION II

COMPRISING IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.

NORTH GUJARAT CIRCLE

DETAILED REPORTS BY LOCAL OFFICERS

The works in charge of this circle are (i) Timba tank at Harsol in Sabarkantha District, (ii) Saiat and Kanewal tanks in Kaira District, (iii) Gangasagar tank in Banaskantha District and the following irrigation works in Mehsana and Amreli Districts which have been received incharge of this circle owing to the merger of Ex-Baroda State and they have been

not declared either as First Class or Second Class irrigation works except one viz., Badi Padwa irrigation tank which has been declared as First Class irrigation tank. The proposals regarding declaration of the two tanks viz., Shri Chimnabai Sarovar and Thol Tank are under consideration. As regards remaining tanks, steps are being taken to declare them.

The tanks in merged State areas are :—

- (1) Shri Chimnabai Sarovar.
- (2) Thol tank.
- (3) Ambli Pipardi tank.
- (4) Chandrasar tank.
- (5) Vatrasar tank.
- (6) Mota Ankadia tank.
- (7) Mota Bhandaria tank.
- (8) Kumbhanath tank.
- (9) Dhamel tank.
- (10) Pichvi tank.
- (11) Badi Padwa tank.
- (12) Gomati tank.

The tanks from serial number 1 to 4 are in Mehsana District and from serial number 5 to 12 are in Amreli District and they are in charge of Mehsana Division except the last one which is in charge of Port Officer and Harbour Engineer, Okha.

TIMBA TANK (SABARKANTHA DISTRICT)

The rainfall gauged at the site of the tank was 25.76 inches as compared with 13.61 inches of the last year. The tank was filled upto full supply level R. L. 107.00 on 5th August 1952. Irrigation is by flow on this tank and the lands irrigated by the cultivators during the Rabi season of 1952-53 was 359 acres. The gross revenue assessed was Rs. 1,100. The miscellaneous revenue on account of tank bed cultivation during Kharif and Rabi seasons was Rs. 401. The tank was maintained at a cost of Rs. 2980 during the year under report.

SALAT TANK (KAIRA DISTRICT)

The rainfall gauged at the site of tank was 37.28 inches. The tank bund breached on 25th July 1952 and hence no water was stored and consequently no irrigation was done in any season of the year under report except 3 acres which was done by the water from the borrow pits by lift. The miscellaneous revenue realised during the year amounted to Rs. 163 against Rs. 286 of the previous year. Special Repairs work to the breached portion was entrusted to the Mahi Canal Construction Division, Thasra.

KANEWAL TANK (KAIRA DISTRICT)

The rainfall gauged at the site of the tank was 19.5 inches. The tank was fully filled up and the water was utilised for Kharif and Rabi crops. The area irrigated was 966 acres and the gross revenue assessed was Rs. 3,846. The miscellaneous revenue realised during the year under report amounted to Rs. 1,207 against Rs. 3,451 of the previous year. No remission was granted during the year.

GANGASAGAR TANK (BANASKANTHA DISTRICT)

The tank was in charge of the Revenue Department during the year 1951-52 but owing to its declaration as First Class work, it came in charge of the Public Works Department from 1st April 1952. The area irrigated during the Kharif and Rabi seasons of the year under report was 340 acres and the revenue assessed was Rs. 1,700. The tank was maintained at Rs. 3,800 during the year.

TANKS IN MEHSANA DISTRICT

The monsoon began in the 3rd week of July 1952 which continued for a short time with 22 inches rainfall on average and consequently the year proved to be a dry one in Mehsana, District.

The area irrigated and the revenue realised are as under :—

Serial No.	Name of Tank.	Irrigation.		Tank bed cultivation,	
		Area irrigated.	Revenue realised.	Area irrigated,	Revenue realised.
		Acres.	Rs.	Acres.	Rs.
1	Shri Chinubai Sarovar ...	1174.70	8,247	1108.04	17,806
2	Thol Tank ...	78.40	208	504.00	2,520
3	Ambali Pipardi ...	.....	.....	32.57	145
4	Chandrasan ...	35.40	266	80.00	109
5	Vatrasar ...	23.02	76	23.02	428

TANKS IN AMRELI DISTRICT

The monsoon began by the 1st week of July 1952 and the rainfall was 10 inches to 12 inches on average. There was no rainfall after the 2nd week of August 1952 and thus the year proved to be a dry one.

The area irrigated and the revenue realised are as under :—

Serial No.	Name of Tank.	Irrigation.		Tank bed cultivation.	
		Area irrigated.	Revenue realised.	Area irrigated.	Revenue realised.
		Aores.	Rs.	Aores.	Rs.
1	Mota Ankadia ...	118-00	2	1-5	1,450
2	Mota Bhandaria ...	.....	.....	.....	5,525
3	Kumbhanath ...	75-00	.....	.....	891
4	Dhamel ...	.....	.....	.....	428
5	Pichvi ...	131-00	626	80-80	1,765
6	Badi Padwa ...	94-82	774	198-82	51
7	Gomati ...	128-00	146	.....	.....

SOUTH GUJARAT CIRCLE

MUWALIA TANK

This is an important tank situated near Dohad Town in the Panch Mahals Collectorate. It has a catchment area of about 30 square miles. The tank was filled to R. L. 142.65 i.e., 3.5 feet above the F. S. L. (139.15) during the year under report. The water available in the tank was fully utilized for Kharif and Rabi crops.

The total area irrigated was 3,158 acres and 2 gunthas and the net assessment amounted to Rs. 9,963-14-0. Some special repairs were carried out to the extent of Rs. 19,644 during the year under report.

OLD TANKS.

Repairs to old tanks and drainage channels were carried out at a total cost of Rs. 9,18,584 and Rs. 1,85,246 respectively during the year under report. The details of repairs carried out to old tanks and drainage channels are as under :—

Name of Division.	Cost of Repairs.	
	Tanks.	Drainage Channels.
	Rs.	Rs.
(1) Panch Mahals ...	2,17,159	.....
(2) Baroda ...	.....	.....
(3) Broach ...	3,76,242	1,70,932
(4) Surat ...	3,09,067	14,314
(5) Navsari and Dangs Division ...	16,116	.....
Total ...	9,18,584	1,85,246

The increase in expenditure was due to scarcity works.

DOSWADA AND CHIKHLI BANDHARA CANALS

This work is in Vyara Taluka of Surat District and it was constructed between the years 1912 and 1913 at an aggregate cost of Rs. 2,40,387. The rainfall gauged during the year 1952-53 at the site was 45.34 inches against 67.45 inches, the average of the preceding three years. The water in the tank was only 39 million cubic feet against the capacity of 74 million cubic feet. Due to scarcity rainfall this year and silting up of the Doswada Tank, much difficulty was experienced to meet with the heavy demand of water from the cultivators. Even the existing capacity of 74 million cubic feet is insufficient to cope with the growing demand. It is therefore proposed to raise the Doswada dam by 5 feet thus increasing the capacity of the tank by 44 million cubic feet. This additional storage will be useful for extending irrigation facilities to about 800 acres.

Without this tank, due to vagaries of the rain-fall, loss to crops per year will be at least 25 per cent. on an average. Thus, its indirect advantage in adding to national wealth is immense. Its usefulness will be even more pronounced, if the Doswada weir is raised by 5 feet.

The area irrigated and revenue realised during the year under report are as under :—

Season.		Area irrigated.		Revenue realised.	
		Acres.		Rs.	
Kharif	926	...	16,812
Rabi	178	...	...
Total		...	1,104	...	16,812

No new works were carried during the year under report but the canals were maintained in good condition by carrying out current and special repairs at a cost of Rs. 16,433.

MINOR IRRIGATION WORKS TAKEN UP UNDER THE SPECIAL LOAN PROGRAMME.

The minor irrigation works which were carried out under the Special programme of rupees One Crore loan, advanced by the Government of India in furtherance of the "Grow More Food Campaign", were in full swing during the year under report. In this programme, priority has been assigned to repair works. 62 works were completed and 9 works remained in progress, during the year under report. The popular contribution was reduced to one-sixth of the estimated cost in scarcity affected areas.

TICHAKIA WEIR SCHEME

The principal work taken up under the Special one Crore Loan Programme, is the construction of Tichakia Weir and its canal system. The river Zankhari is a perennial river with its origin in the ranges of

Western Ghats. It meets river Purna near village Murakvi of Valod Mahal. It has Mindhola river on North and Purna river on South. The land in the Doabs, formed by these rivers is rich and fertile. The crops generally are paddy, jowar and cotton.

During the period of the Ex-Baroda regime, the work on the Tichakia weir with six miles of Right Bank Canal was started in the year 1910 as a first stage of the full-fledged Zankhari Irrigation Scheme. The work was completed in 1917. During the heavy floods of the succeeding monsoon, the central portion of the Bandhara about 280 feet in length, was washed away, the sections adopted in the original design not being strong enough, to take up the resulting stresses. No repairs were undertaken, presumably due to the controversy about the work being at all proving successful as envisaged without the construction of a storage reservoir upstream. With no reservoir to work as a stand by, this weir can be useful only for irrigating and extending Kharif crops like paddy and an initial soaking for Rabi.

After merger of Ex-Baroda State with the State of Bombay, the work of restoration of the old breached Tichakia Weir, sanctioned for five lakhs, is taken up. In this case, condition for popular contribution is waived by Government but betterment charges are to be levied on the beneficiaries of the Scheme who do not want to contribute towards the cost of the work. The weir work is completed and an expenditure of Rs. 2,92,515 was incurred during the year under report.

It is expected that Right Bank Canal will afford irrigation facilities to about 5,000 acres, while Left Bank Canal will protect about 7,000 acres. Thus in all 12,000 acres are likely to be benefitted. About 4,000 tons of additional food production is expected on completion of the canal system.

The details of works taken up under the Loan Programme for Minor Irrigation Works and expenditure incurred in various Divisions in this Circle, during the year under report are as under :—

Name of Division.	Number of works taken in hand.	Number of works completed.	Expenditure incurred.
			Rs.
Nasari and Dangs Divisions	50	25	95,587
Surat Division	42	32	8,09,067
Brosach Division	108	97	5,47,174
Baroda Division	.....	.....	.....
Panch Mahals Division	5	4	14,708
	200	158	9,66,481

GUJARAT IRRIGATION CIRCLE

EIGHT MONTHS CANAL EX : SABARMATI RIVER AT FATEWADI.

This is a fair weather canal taken off of the Sabarmati river without any diversion weir across the river. It is meant to share the available supplies in the river. An amount of Rs. 2,12,825 was spent on construction works and maintenance during construction, during the year under report. The total expenditure on the work to end of March 1953 was Rs. 8,92,603 for work portion only. In addition to above, the work of constructing interconnecting channels from Fatewadi main canal to the existing bund system near Fatewadi which is a subsidiary scheme solely dependent on the Fatewadi Eight Months' Canal ex: Sabarmati river, was also in progress during the year under report from the funds under the head 18-A Irrigation—Special Programme of Minor Irrigation Works. Expenditure of Rs. 53,521 was incurred on it during the year under report. The total expenditure on the work to end of March 1953 was Rs. 1,00,058 for work portion only.

For only 3 miles, the canal goes in deep cutting and thereafter the ground is lower than the Sabarmati river bed. This fact is taken full advantage of in this project.

The canal functioned for a third time during the year under report though it is not finally reported complete. It is nearly completed except some cross drainage works and buildings etc.

The area irrigated under this canal in Kharif and Rabi put together, was 21,259 acres and the assessment was Rs. 2,51,456 during the year under report against 9,921 acres and Rs. 99,414, respectively, during the previous year. Remissions during the year under report amounted to Rs. 5,751.

GOBLEJ TANK

This tank is situated in the Matar Taluka of the Kaira District. The tank was filled from the Meshwa Canal. The area applied for and sanctioned under this tank in Kharif and Rabi put together, was 2,391 acres during the year under report. The total net area irrigated was 2,390 acres and the assessment was Rs. 24,134 during the year under report. An amount of Rs. 82,651 was spent on Special Repairs to this tank for remodelling and strengthening the bund during the year.

GALKI TANK

This tank is situated in Mehmedabad Taluka of the Kaira District. This tank was also filled from the Meshwa Canal. The area applied for and sanctioned under this tank during the year under report was 1,198 acres. The net area irrigated was 1,198 acres and the assessment was Rs. 12,163 for Kharif and Rabi seasons.

Both these Goblej and Galki tanks were maintained during the year under report at a cost of Rs. 5,787. Both of them are storage tanks, depending on local rainfall and replenishment from the Khari river and Meshwa Canal. The miscellaneous revenue derived from the Fatewadi Canal, the Goblej tank and the Galki tank amounted to Rs. 5,732 during the year under report.

HARIPURA, WADADLA, KARACHIA, JAVLA, MUWAL AND SARSI TANKS.
IN SAVLI TALUKA AND SHRIPORE TIMBI TANK IN WAGHODAI
TALUKA, DISTRICT BARODA

These are small tanks in Baroda District. Of these tanks, Muwal and Karachia tanks breached during the heavy rains in July 1952. These breaches meant a complete loss of 3,000 acres of irrigation but efforts were however made to make up this loss by utilising the irrigation potential of the remaining tanks to the maximum extent possible. Sufficient care was exercised in the judicious and proper distribution of water in co-operation with the irrigators with the result that the area that could be irrigated under the remaining tanks was 2,811 acres which was more than the previous year's figure of 2,183 acres. The total area irrigated under these tanks can be considered quite satisfactory as compared with the average of the past three years as shown below :—

Year.	Total area irrigated.
	Acres.
Average	2,773
1952-53	2,811

The total assessment during the year under report amounted to Rs. 13,324 as against Rs. 14,987, the average of the past three years. In addition to above, the income from tank bed cultivation and other sources during the year under report was Rs. 26,159. The amount spent on maintenance and special repairs during the year under report was Rs. 78,670.

The rainfall at representative places Savli and Shripore Timbi was 31.42 inches and 28.36 inches, respectively, against 29.23 inches and 27.30 inches, respectively, the average of the past three years. Due to heavy intensity of precipitation in the last week of July 1952, Haripura, Wadadla, Javla, Sarsi and Shripore Timbi tanks were completely filled up.

BOMBAY CIRCLE

The following works were undertaken as Minor Irrigation Works in the Bombay Circle during the year 1952-53.

LIFT IRRIGATION SCHEME AT CHAWNE, TALUKA PANVEL, DISTRICT KOLABA.

This is a lift irrigation scheme and consists of 2 portions (i) Civil Engineering portion costing Rs. 87,709 and (ii) Mechanical Engineering portion costing Rs. 58,612. The whole scheme has been completed. The expenditure incurred on Civil Engineering portion during the year under report was 7,551.

BANDHARA ACROSS THE MAHISDARA NALLA AT MUTHOLI, TALUKA ROHA, DISTRICT KOLABA

This work consists of a masonry bandhara, across the Mahisdara Nalla, a branch of the Kundalika river at Mutholi, with canals. The estimated cost of the scheme is Rs. 1,81,323. This estimate is revised and amounts to Rs. 2,38,239.

The work is divided in three sub-estimates as under :—

- (i) Main Bandhara.
- (ii) The protective works.
- (iii) Canals and cross drainage works.

The work is completed except a siphon on a distributary and two cross drainage works. Irrigation is being practised on a small scale, as it is perhaps just the beginning. The expenditure incurred on this scheme during the year under report was Rs. 39,507.

BANDHARA AT SHIL, TALUKA KHALAPUR, DISTRICT KOLABA

This work is let out on contract. The bandhara work has been completed. The channel work could not be taken up as the land was not handed over to the Public Works Department earlier. The land has however, now been handed over and the work will be taken up shortly. The estimated cost of the scheme is Rs. 59,360. The scheme, when completed, will irrigate 150 acres of land. The expenditure incurred during the year under report was Rs. 6,835.

In addition to the above works, the following survey works were carried out :—

SURVEY OF PEJ ULHAS, PATALGANGA, KAL KUNDALIKA VALLEY

The survey work of Nadode Bandhara, has been completed. The plans and estimates were prepared and as an alternative to this scheme, the detailed survey of Right Bank Canal is being carried out.

SURVEY OF BANDHARA AT DOLWAHAL

The survey work is in progress. The estimated amount is Rs. 3,410.

SURVEY OF RAJA NALLA

The survey for a length of about 14 miles of canal length has been completed. The soil survey is in progress. The expenditure incurred during the year under report was Rs. 3,834.

MAKING DETAILED SURVEY OF TANKS AND BANDHARAS IN KOLABA DIVISION

Survey work is in progress. The estimated amount is Rs. 3,000. The expenditure incurred during the year under report was Rs. 236.

DECCAN IRRIGATION CIRCLE

POONA IRRIGATION DIVISION

Rakh Tank.—This tank is situated about 5 miles from Walha Railway Station of the Southern Railways and is formed by an earthen dam constructed across a nalla near Rakh Village in Purandhar Taluka of the

Poona District. The catchment area of the tank is 5.36 square miles and its capacity is only 34.22 million cubic feet. The depth of this tank is 23 feet. The tank has two channels of a total length of 3 miles. The area under command of channel No. 2 is 321 acres and that on channel No. 1 is 265 acres.

The information about the tank is detailed below :—

- (a) F.S.L.—R.L. 193.00.
 (b) Depth—23 feet.
 (c) Contents—34.22 million cubic feet.
 (d) Silt deposited up to R.L.—175.
 (Sill R.L. 170 + 5 feet sill depth).
 (i) Depth 5 feet (ii) Contents 2.05 million cubic feet.
 (e) Available capacity for irrigation—32.17 million cubic feet.
 (f) Total run-off received during the year—12.70 million cubic feet.
 (g) Million cubic feet consumed during the year 1952-53 on irrigation—
- | Hot Weather. | Kharif. | Rabi. | Total. |
|--------------|---------|-------|--------|
| Nil. | 4.67 | 2.65 | 7.32. |
- (h) Date on which maximum height was reached—11th June 1952—
 (i) Water level 13.30 feet only.
 (ii) Contents being 12.70 million cubic feet.
 (i) Period of waste-weir overflow and million cubic feet lost : Nil, as the level did not reach the maximum height of the tank to overflow.
 (j) Date on which lowest level reached and contents left unused : The tank level reached sill level on 19th November 1952 and no contents were left unused.
 (k) Date on which tank went dry.—This year the tank went dry two times viz, on 15th August 1952 and 20th November 1952.
 (l) Period of dryness :—
 15th February 1952 to 8th June 1952, 15th August 1952 to 27th September 1952 and 20th November 1952 to 14th February 1953 = 243 days in all.
 (m) Area of Irrigation :—

		Kharif.	Rabi.	Hot Weather.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.
(i) Cane and other perennials	Nil.	0.8	.....	.....	0.8
(ii) 8 months	5.24	0.21	.....	.....	6.5
(iii) Seasonals	43.11	37.22	.....	.....	80.33
Total	48.35	38.11	.....	.....	87.8

(iv) Estimated value of crops—Rs. 13,045.

- (n) No perennial as well as 8 months crops are allowed. The areas shown above are unauthorised irrigation.
- (o) For the year 1952-53, the maximum demand was received but due to the unsatisfactory condition, the demand could not be met with.
- (p) Rainfall in inches—2.31 i.e. below normal.
- (q) (i) Water assessment in 1952-53—Rs. 557-12-0.
 (ii) Last three years' average of water assessment—Rs. 1,589-0-0.

During the year under report, the replenishment was not received in the tank to its full extent. The silt deposit is roughly judged from the deposit of silt near the gauge plate as there are no arrangements for observing the silt deposit in the tank. To ascertain the correct silt deposit, contour survey was done during the year, but the results are still awaited.

VICTORIA TANK

This is an incomplete tank situated near mile 65 of the Mutha Right Bank Canal. It has no storage and there is no area under irrigation. This tank was handed over to the Revenue Department in the year 1942 and only maintenance is done by this Circle.

KHAMGAON TANK

The tank is situated in mile 43 of the Mutha Right Bank Canal and is partially completed. It receives replenishment during the monsoon through the Mutha Right Bank Canal Distributary No. 17. This tank was raised by 6 feet increasing its capacity to 36 million cubic feet in the year 1944 and is expected to irrigate about 720 acres under normal conditions.

(a) F.S.L. Capacity depth and contents in million cubic feet—22 feet and 38.10 million cubic feet.

(b) Silt deposit and contents—Not considerable.

(c) Available capacity in million cubic feet for irrigation—38.10 million cubic feet.

(d) Total replenishment received during the year in terms of million cubic feet—49.73.

(e) Million cubic feet consumed during the year on irrigation—

Kharif	Rabi	Hot Weather	Evaporation.
...	36.74	...	1.36 million cubic feet.

(f) Date on which the maximum height reached—21st August 1952.

(g) Period of waste-weir flow and million cubic feet—Nil.

(h) Date on which lowest level reached and contents million cubic feet unused—3rd January 1953. 0.01 million cubic feet unused.

(i) Date on which the tank went dry—4th January 1953.

(j) Period of dryness—4th January 1953 to 7th July 1953.

(k) Area of irrigation—Acres 700 Gunthas 38.

(l) Estimated value of crops—Rs. 76,575.

(m) Proportion of perennial crops, 8 months crops and seasonals on the total :—

- | | |
|--------------------|---------------|
| (i) Perennial | } Nil. |
| (ii) 8 months | |
| (ii) Seasonals ... | 100 per cent. |

(n) Reasons for not irrigating full irrigable area—Fully irrigated.

(o) Raifall in inches—8.87 inches.

(p) Water rate assessed during the year compared with last 3 years' average :—

- | | |
|-------------------------------------|----------------|
| (i) 8 months. | |
| (ii) Seasonals. | Rs. 6. |
| (iii) Total assessment for the year | Rs. 6,021-2-0. |
| (iv) Average of the three years— | Rs. 3,837-0-0. |

The increase in the assessment over that of the last year was due to the 50 per cent. increase in the water-rates.

BHANDHARAS (POONA DISTRICT)

Bhandharas are small weirs built across streams so that the water level may be raised sufficiently to command the lands to be irrigated. The following table gives the area irrigated and consolidated revenue assessed on the Bhandharas in the Haveli Taluka of the Poona District during the year under report as compared with the average of the past three years :—

Year.	Area Irrigated	Consolidated revenue assessed.		
		Irrigation Share.	Land revenue.	Total.
1	2	3	4	5
	Acres	Rs.	Rs.	Rs.
1952-1953 ...	29	73	174	247
Average ...	59	328	251	379

NASIK IRRIGATION DIVISION

e. KHIRDI SATHE TANK.

This is an earthen dam having a length of 2510 feet, and height of 48.75 feet. Its depth over the sill level is 20 feet having useful capacity of 91 million cubic feet.

There is no surety of supply of water to last for full year. However perennial irrigation is allowed by sanctioning water applications for complete twelve months on crops on storage water as far as possible and then maintain on well water up to maturity when storage is found to be insufficient. Lucerne and fruit trees are also allowed in small areas.

On 1st April, 1952, water level was 11.20 feet with the corresponding contents of 27.64 million cubic feet. The tank was dry on 14th May, 1952. The first replenishment was received on 15th July, 1952 and the tank emptied on 30th August 1952. Second replenishment was received on 21st September 1952. The tank filled up to a depth of 16.37 feet on 27th September 1952, and soon started the exhaust. This year the tank completely dried on 25th October, 1952. The first draw off for irrigation purposes, commenced on 5th October 1952, with a discharge of 1.95 cusecs. The total rainfall in the catchment was 9.25 inches.

The following table gives the figures of area irrigated, revenue assessed etc. during the year under report as compared with the average of past three years :—

Name of Tank	Area irrigated.		Water rate assessed.		Gross revenue assessed.	
	1952-53, Average.		1952-53, Average.		1952-53, Average.	
	Acres	Acres	Rs.	Rs.	Rs.	Rs.
Khirdi Sathe Tank.	278	930	5,256	8,550	5,402	8,803

Rain fall	
1952-53 : Average.	
Inches.	Inches.
9.23	25.68

The decrease in area irrigated and revenue assessed was due to failure of late rains in Rabi Season 1952-53, and the tank emptied on 25th October 1952. The expenditure incurred on maintenance and repairs amounted to Rs. 1,573 against the expenditure of Rs. 1,934 for the last year.

BANDHARAS (NASIK DISTRICT)

There are numerous bandharas situated in the Nasik District. There are in all 296 Bandharas. The expenditure incurred on repairs to bandharas (23 in number) during the year under report amounted to

Rs. 31,748. The following table gives the area irrigated and the consolidated assessed revenue during the year under report as compared with the average of the past three years :—

Year	Area irrigated.	Consolidated revenue		Total
		Irrigation Share.	Land Share.	
	Acres.	Rs.	Rs.	Rs.
1952-1953 ...	26,804	1,65,450	49,299	2,14,749
Average ...	27,674	1,75,538	58,262	2,33,800

AHMEDNAGAR DIVISION

VISAPUR TANK

The Visapur Tank dam which is situated about 2 miles from the Visapur Railway Station on Dhond-Manmad Railway line is built across the Hunga River, the tributary of the Bhima River. It was started as a famine relief work in 1896 and was subsequently completed in successive stages by the Hurs criminal tribes and convict labour by June 1947. The earthen Dam which is 7,440 feet long and 84 feet high forms lake having a gross capacity of 1,510 million cubic feet.

The estimated cost of the whole scheme was Rs. 41 lakhs of which a sum of Rs. 21 lakhs was spent on the dam and head works and the balance on the construction of the canal, distributaries, and minors which aggregate 46 miles in length. The total area under command is 95,000 acres of which 26,000 acres are irrigable. The catchment area of the tank is 159 square miles. Irrigation on this tank was first started during the Rabi season of 1929-1930. Owing to an increased demand of water due to the starting of the "Belwandi Sugar Farm" on Chimbla Distributary the waste-weir was raised by 2 feet in March 1934 increase the storage in the tank by 130-20 million cubic feet.

On 1st April 1952, the level of water in the tank was 22.0 feet above the sill of the outlet, the contents being 329 million cubic feet. The lowest level of water of 14.75 feet was reached on 7th June 1952, the corresponding contents then being 127 million cubic feet. Replenishment was received in the tank on 8th June 1952 and the level went to 14.85 feet, the corresponding contents being 120 million cubic feet. The highest level of 20.80 feet was reached on 11th June 1952, the corresponding contents being 286 million cubic feet. The tank did not overflow during the year under report.

The area irrigated and the revenue assessed, etc., during the year under report as compared with the averages of the last three years, are as under :—

Name of work.	Area irrigated.		Water rates assessed.		Gross assessed revenue.		Realisation Rainfall.			
	1952-1953.	Average.	1952-1953.	Average.	1952-1953.	Average.	1952-1953.	Average.	1952-1953.	Average.
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches
Visapur Tank	1,740	7,006	10,407	58,872	24,611	68,641	59,093	41,050	10.73	18.94

The expenditure incurred on maintenance and repairs during the year amounted to Rs. 11,961. The estimated value of crops was Rs. 8,59,800. The decrease in the area irrigated and consequent decrease in assessment was due to insufficient storage in the tank.

LIMJIWADI TANK

This tank has been constructed with the object of growing more food crops. The construction was completed in the year 1946-47. This tank is situated in Shrigonda Taluka of the Ahmednagar District. The area irrigated on this tank for food and fodder crops during the year under report, was 489 acres against last year's figure of 612 acres, with an estimated value of crops = Rs. 79,450.

CENTRAL CIRCLE

KOREGAON TANK

The tank was dry from 1st April 1952 to 23rd September 1952. The first replenishment of 3.75 million cubic feet was received on 24th September 1952. On 15th October 1952, the gauge was 1.84 with contents 4.67 million cubic feet and hence no water could be allowed for irrigation except for 2 acres in Rabi season. The average rainfall gauged at Koregaon was 11.22 inches against 21.07 inches, the average of the past three years.

WADSHIVNE TANK

On 1st April 1952, the tank was dry. On 15th June 1952 the gauge was 3.40 feet with contents of 3.00 million cubic feet. The total replenishment of 14.44 million cubic feet was received during the year under report and the same was utilised for irrigating an area of 130 acres during Rabi season. The average rainfall gauged was 7.90 inches against 23.26 inches, the average of the past three years.

GHERDI TANK

This minor tank is formed by an earthen dam across the Nalla Apprupa near Gherdi village about 3 miles upstream. The dam is 1,400 feet in length and 46 feet in height. The gross storage of the tank is 102·85 million cubic feet but storage available for irrigation is 86 million cubic feet only. The tank was provided with left bank canal of 4 miles 1 furlong and 220 feet in length and distributary of 2 miles 20 furlongs and 370 feet in continuation of the canal. The designed discharge of the canal is 8·9 cusecs from head to tail for irrigating 1,020 acres when the tank is full.

On the 1st April 1952, the level of water in the tank was 10·90 feet. The first replenishment of 59·63 million cubic feet was received from 3rd June 1952 to 15th June 1952. On 15th June 1952, the gauge was 21·50 feet with contents 69·07 million cubic feet. An area of 124 acres was irrigated during Kharif season. On 15th October 1952, the gauge was 26·00 feet with contents 102·53 million cubic feet. This was utilised for irrigating an area of 802 acres during Rabi season. There was a total replenishment of 126·91 million cubic feet during the year under report. The total rainfall was 16·55 inches against 19·06 inches, the average of past three years.

HOTGI TANK

The tank has been constructed in the year 1944 as scarcity work. The tank is an artificial reservoir with an earthen embankment of 5,600 feet in length and of 41 feet maximum height. The work is nearly completed. The first 6 miles of the canal functioned during the year under report.

On first April 1952, the level of water in the tank was 7·27 feet with contents 82·47 million cubic feet. The first replenishment of 9·73 million cubic feet was received on 23rd May 1952 to 26th May 1952. On 15th June 1952, the gauge was 11·44 feet with contents 174·59 million cubic feet and on 19th October 1952, the gauge was 12·30 feet with contents 163·69 million cubic feet. A total replenishment of 118·54 million cubic feet was received during the year under report. This was utilised for irrigating 200 acres in Hot Weather, 118 acres in Kharif and 1,246 acres in Rabi. The average rainfall gauged was 17·51 inches against 22·83 inches, the average of the past three years. Irrigation has generally increased on this tank since 1951-52 and the irrigators are getting irrigation-minded.

WAKI BANDHARA

The area of 38 acres was irrigated during Rabi season. The gross revenue was Rs. 57 only.

TALSANGI TANK

The tank is in Mangalwedha Taluka in Sholapur District and has been taken over from the Sangli State merged in the Bombay State. This tank is managed by the Mamlatdar of Mangalwedha. The tank was dry during the year under report.

SANGWI TANK

The work is still in progress. Irrigation to the extent possible was however started from Rabi season of the year 1947-48.

PAREWADI TANK

This work is still in progress. Irrigation to the extent possible has however been started from the Rabi season of 1947-48.

JAWALA TANK

This is situated in the neighbouring valley of Gherdi Tank. The tank site lies on the boundary of villages Gherdi and Jawala across a Nalla which takes its rise in the hills in the Merged Jath State. The project was administratively approved under Government Resolution, No. 7526/39, dated 1st June 1942, and technically sanctioned for Rs. 1,08,750 in Government Resolution, Public Works Department, No. 5886/36 of the 13th January 1943. This work was started as scarcity work in 1942 and some work was carried out. The work was again started in 1944. The work of filling puddle trench in the gorge portion was in progress. Subsequently the work was stopped. Again the work was started as scarcity work in 1953 which is still in progress.

CHINCHOLI TANK

The site of the tank is situated near Chincholi village just upstream of Indapur-Akluj-Sangola Road and is 3 miles from Sangola, the taluka place and the Railway Station. The average annual rainfall is 19 inches. This is one of the several schemes investigated by the Lowsley Organisation in the Sholapur District. It was reinvestigated in the year 1927. This work was started as scarcity work in 1953, which is now in progress.

MANGI TANK

This earthen dam is being constructed across the River Kanala about half a mile to the West of Mangi village which is about 3 miles from Karmala, the taluka place. The average annual rainfall is 19 inches. The scheme is the outcome of the suggestion made by the late Divan Bahadur K. R. Godbole, Executive Engineer, Sholapur Division in 1897. When famine conditions developed in the District, the work was started as a relief work in the year 1897. This work was again taken as relief work in year 1899, 1906 and 1921. The expenditure so far incurred was about 8.5 lakhs. This was the only big tank that could be taken in Karmala Taluka, which is generally the worst affected area of the Sholapur District and hence the work was taken as scarcity work on 23rd January 1953. The work is still in progress.

SAPTANA TANK

The site of the tank is situated near village Venegaon on Poona-Sholapur Road. The site is about 1/2 mile to the left of the Poona-Sholapur Road in mile No. 100. The average rain-fall is 21 inches. This project was

originally proposed by Shri L. M. Bose, M.I.C.E., the late Executive Engineer, Special Duty in the year 1908 with a view to having the project ready for work to be started if required for famine relief. This was again investigated in 1915 and 1927. In the year 1938 the plans and estimates, (Rs. 4,52,555) were prepared by the Executive Engineer, Snolapur Division. The final alignment of the dam was given by Shri M. L. Champhekar, the Chief Engineer (Irrigation) to the Government of Bombay, Public Works Department. The work was started as scarcity work on 21st February 1953. The dam work and outlet works are complete and only canals and masonry-work of waste weir is remaining.

MADANWADI TANK

The plan and estimate for this work have been administratively approved and technically sanctioned under Government letter, Agricultural and Forests Department, No. 1821/3668-F of 12th April 1948. The work was actually started on 12th April 1948. This work was originally under the control of Director of Agriculture Engineering, Poona and subsequently transferred to the Central Circle in November 1949. The dam, waste weir and outlet work are completed. Total cost of the dam work is Rs. 8,24,564. The work of right bank canal was also started and completed to a length of three miles and six furlongs together with cross drainage work.

Due to replenishment of water in the tank, 80 acres were irrigated in Kharif and 592 acres were irrigated in Rabi. Thus in all 672 acres were irrigated during the year under report, bringing the revenue of Rs. 5,123.

PALASDEO TANK

The plans and estimates for this tank work have been administratively approved and technically sanctioned for Rs. 6,53,237 under Government Letter, Agriculture and Rural Development Department, No. 1910-30751-F, of 6th December 1947. The work was actually started on 10th March 1948. This work was in the first instance under the control of the Director of Agriculture, Engineering, Bombay State, Poona but was subsequently transferred to this Circle in November 1949. The dam, outlet and waste weir work have been completed. The construction of Right and Left Bank Canals has been completed as scarcity works. The work of cross drainage works on both the canals is in progress. The total area likely to be irrigated after completion of the work is about 1,380 acres.

EAST KHANDESH DIVISION

The old Bandharas and channels are grouped as under:—

- (1) Girna River Group.
- (2) The Bori River Group.

The sub-joined table shows the area irrigated and the revenue derived from these works as compared with the average of the past three years :—

Area irrigated.		Revenue.				Total.	
		Irrigation share.		Land share.			
1952-53.	Average	1952-53	Average.	1952-53	Average.	1952-53	Average.
Acres	Acres	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
448	592	3,836	4,371	1,372	1,355	5,208	5,720

WEST KHANDESH DIVISION

The old bandharas and channels are grouped as under :—

- (1) The Upper Panzra River Group including Gondur tank.
- (2) The Kan River Group.
- (3) The Burai River Group.

The sub-joined table shows the area irrigated and the revenue derived from these works as compared with the average of the past three years :—

Area irrigated.		Revenue.				Total.	
		Irrigation share.		Land share.			
1952-53.	Average.	1952-53	Average.	1952-53	Average.	1952-53	Average
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
8200	8384	59,947	62,406	12,202	12,871	72,209	75,277

KARNATAK IRRIGATION CIRCLE

There are in all 5443 tanks and 1641 bandharas in the jurisdiction of the Dharwar Irrigation Division in this Circle out of which 2983 tanks are situated in Dharwar District and 2460 tanks and 1641 bandharas in the

up-ghat talukas of North Kanara District. The following table gives the information regarding area irrigated etc. on the Minor Irrigation works in the Dharwar and North Kanara Districts during the year 1952-53 :—

Name of the District.	Area irrigated.	Irrigation share.	Miscellaneous receipts.	Remission.
	Acres.	Rs.	Rs.	Rs.
Dharwar District ...	84,549	2,19,924	.....	3,162
North Kanara District upghat talukas only.	38,950	67,394	.....	3,332

The details of expenditure incurred on the Minor Irrigation works in this Circle are given below :—

	Rs.
Repairs to 556 Minor Irrigation works (under Loan Programme).	5,56,415
Repairs to 135 Minor Irrigation works (ordinary funds).	98,010
Repairs to Irrigation Rest House as well as constructing a hume pipe aqua-privy in the compound of Rest House at Girsinkop).	
Constructing an Irrigation tank at Mandihal, Taluka Dharwar.	25,993
Surveying and preparing plans and estimates for repairs to Minor Irrigation works under Loan Scheme.	25,058

BANDHARAS

The details of expenditure during 1952-53 in the following four Bandharas in Belgaum District, completed during 1951-52, were as shown below :—

Name of work.	Area of Irrigation.	Food production.	Expenditure.
	Acres.	Tons.	Rs.
1. Bandhara at Lolsur ...	250	100	4,964
2. Bandhara at Birangaddi ...	200	67	948
3. Bandhara at Balobal ...	200	67	1,173
4. Bandhara at Nallanhatti ...	400	130	646
Total ...	1,050	364	7,731

SOUTHERN CIRCLE

BELGAUM DIVISION

There are approximately 525 second class irrigation tanks situated in the Belgaum Division. During the year under report, repairs to 32 tanks were carried out at a total cost of Rs. 21,472. Besides, a sum of Rs. 3,26,086 was spent on 18 Bandhara works and in addition, a sum of Rs. 30,420 was spent on the work of surveying and preparing plans and estimates for repairs to second class tanks and lift irrigation schemes. The area irrigated during the year 1952-53 was 20,805 acres and the irrigation share of land revenue was Rs. 78,425. The total direct and indirect receipts amounted to Rs. 1,04,179 as compared with Rs. 1,04,879 of the previous year.

DHARWAR DIVISION

There are only 24 minor irrigation tanks in charge of this Division, and are all situated in the merged State areas of the Dharwar District. Only repairs to these tanks are carried out by this Department, at the instance of the Revenue Department. During the year under report, repairs to six tanks were carried out at a cost of Rs. 14,714. Besides these tanks, one Bandhara at Meundi in Mundargi Petha is in charge of this Department. The area irrigated and the assessment thereon during the year under report, were 37 acres and Rs. 822 respectively. The decrease in the area irrigated is due to a breach in aqueduct No. 1 on the right bank canal. The work of construction of a canal syphon in place of the aqueduct was completed during the year under report and water let out for irrigation.

BIJAPUR DIVISION

NANDARGI TANK

The tank is solely dependent on the local rains for its supplies. The rainfall recorded during the year under report was 8.10 inches and was less than the average of the past three years, viz., 16.63 inches. The highest level of water in the tank during the year under report, was at R. L. 198.20 or 11.2 feet above the sill of the outlet on 9th August 1952 against the R. L. 207.00 or 20.00 feet above the sill of the outlet on 7th October 1951. The lowest level was R. L. 192.00 or 5.00 feet above the sill of the outlet on 24th May 1952. The gross revenue assessed was Rs. 1,210 during the year under report.

MAKHANAPUR TANK

This tank was completed during 1951-52. It is solely dependent on the local rains for its supplies. The rainfall recorded during the year under report, was 11.10 inches and was less than the average of the past two years, viz., 13.76 inches. The highest level of water reached during the year under report, was at R. L. 74.5, i.e., 12.5 feet above the sill of the outlet on 18th October 1952 against R. L. 79.00 or 17 feet above the sill

of the outlet on 2nd October 1951. The lowest water level was at R. L. 63.4, i.e., 6.4 feet above the sill of the outlet on 24th May 1952. The gross assessed revenue during the year under report was Rs. 1,451.

ASANGI TANK

This tank was completed on 30th June 1952 and began functioning from July 1952. It is solely dependent on local rains for its supplies. The rainfall recorded during the year under report, was 11.75 inches. The highest level of the water during the year under report, was at R. L. 525.50, i.e., 15.50 feet above the sill level on 3rd October 1952. The gross assessed revenue of the year under report, was Rs. 551.

SECOND CLASS TANKS AND BANDHARAS

There are in all 11 second class irrigation works, and seven Bandharas and only repairs to them are carried out by this Department at the instance of the Revenue Department. During the year under report, no repairs were carried out to these tanks and Bandharas. The area irrigated and the irrigation share of land revenue, were 1,213 acres and Rs. 3,027 respectively, during the year under report. No remission was granted during the year under report.

During the year under report, an expenditure of Rs. 80,616 was incurred on Bandhara works, financed from the One Crore Special Loan Programme. Besides this, an expenditure to the extent of Rs. 33,449 was incurred on scarcity works financed from Special Loan for scarcity works.

KANARA DIVISION

There are only 11 second class irrigation tanks in charge of this Division. Besides these, there are 1,367 undeclared tanks, 469 Bandharas and 86 springs. During the year under report, an expenditure of Rs. 19,310 was incurred on irrigation works under "18-A, Irrigation Loan Programme". In addition to this, a sum of Rs. 1,407 was spent on surveying and preparing plans and estimates for repairs to minor irrigation works during the year under report.

RATNAGIRI DIVISION

There are only four second class irrigation tanks in this Division. The area irrigated during the year under report, was 1,379 acres. During the year under report, an expenditure of Rs. 47,066 was incurred for repairs to tanks and Rs. 43,535 for construction of masonry Bandharas, improvements to tanks and surveying and preparing plans and estimates for minor irrigation schemes under the Loan Programme.

KOLHAPUR DIVISION

After the merger of the Kolhaour State, the Rankala Tank, the Rajaram Tank and the Vadgaon Tank have been taken over by this Department for management. The question regarding their declaration

as first class or second class tanks, is under consideration. During the year under report, an expenditure to the extent of Rs. 1,52,204 was incurred on construction of minor irrigation works under the Special Loan Programme of rupees one crore. Besides this, an expenditure of Rs. 45,302 was also incurred on the Vajrachounde Bandhara taken up as scarcity work financed from the Special Loan for Scarcity Works.

SECTION III

IRRIGATION DEVELOPMENT DIVISION

In the Deccan, when a large perennial canal is opened, widespread water-logging is liable to ensue. Some of this water-logging extends rapidly into the valleys and unless steps are taken to arrest and set it right, the damage consisting mainly of salt efflorescence becomes permanent. The seriousness of the menace was realised as early as 1888 and the controversy regarding the relative effect of channel losses and wasteful irrigation and the best method to adopt to safeguard the land, became yearly more acute. Various experiments were carried out at the instance of the Agriculture Department but by 1913 it was clear that all the methods tried then had failed. It was eventually decided to open a Special Irrigation Division in order that the question of canal development, especially as regards safeguarding the soil, might form the subject-matter of investigation. In June 1916, the Division (now called the Irrigation Development Division) was formed and the work entrusted to it, was the contouring of the commanded areas; the carrying out of a careful survey and classification of the surface and sub-soil, the selection and making out of definite areas suitable for "Blocks" for perennial and other crops; the designing of the drainage works required, and the study of the question of the reclamation of waste lands and areas damaged by water-logging, the salt-efflorescence and the growth of useful timber in such tracts and along the main canal. In short research and investigation into all the problems relating to irrigation by means of actual experiment, has been the sphere of work of the Irrigation Development Division.

The investigation coming within this sphere may be broadly grouped under four heads, viz.:

- (i) Irrigation management;
- (ii) irrigation requirements or the inter-section of agricultural requirements and irrigation limitations;
- (iii) soil physics of irrigated tracts; and
- (iv) drainage and reclamation.

One of the most serious problems on the Deccan Canal areas is that of damage to land by the rise of sub-soil water table in the lands commanded by the canals. This problem is being tackled by the Irrigation Development Division, which has a special well-equipped laboratory to study the soil physics, etc. This Division is also engaged in the construction of drainage schemes in the irrigated tracts of the Deccan. So far three drainage schemes have been nearly completed and the effects of having

drained the accumulation of water in such soils is being felt by improvement of fertility of the soils in the 50 acres for which a demand for canal water was received. The work done during the year 1952-1953 is described in details in the Annual Report No. 19 on the Irrigation and Allied Research in the Bombay State. The summary of the work done by this Division during the year 1952-1953 is given below :—

The following drainage works were under construction :—

GODAVARI CANAL

- (1) Construction of drains in the sub-projects I and II in the factory area of Messrs. Shri Changdeo Sugar Mills on Godavari Right Bank Canal was nearly completed and sub-project III was under construction.
- (2) Construction of drains in the sub-projects I and II in the factory area of Messrs. Godavari Sugar Mills, Ltd., on Godavari Left Bank Canal.
- (3) Suregaon Drainage Scheme between Distributaries Nos. 4 and 5 of Godavari Right Bank Canal.
- (4) Pohegaon Drainage Scheme between Distributary No. 9 and Water Course No. 25 of Godavari Right Bank Canal.
- (5) Kolgaon Drainage Scheme between Distributaries Nos. 6 and 7 of Godavari Right Bank Canal.
- (6) Chas Drainage Scheme between Distributaries Nos. 1 and 2 of Godavari Right Bank Canal.
- (7) Construction of Takli Brahmanaon Drainage Scheme between Distributaries Nos. 6 and 7 of Godavari Left Bank Canal.
- (8) Sonewadi Drainage Scheme between Distributary No. 9 and Water Course No. 27 of Godavari Right Bank Canal.

GIRNA CANAL

- (9) Distributary No. 3 of Girna Canal Drainage Scheme.

NIRA LEFT BANK CANAL

- (10) Distributaries Nos. 8 and 11. Hol Drainage Scheme.
- (11) Distributaries Nos. 22 and 24. Malegaon Khandaj Drainage Scheme.
- (12) Distributaries Nos. 29 and 30. Gunewadi Drainage Scheme.

Some drains were constructed by the sugar companies in the factory areas concerned.

PRAVARA LEFT BANK CANAL

- (13) Matapur Drainage Scheme between Distributaries Nos. 10 and 11.
- (14) Loni Drainage Scheme Distributary No. 2 and Water Course No. 21.
- (15) A. C. Nalla Drainage Scheme.
- (16) Male Mutha Vadgaon Drainage Scheme

A note giving information regarding the activities pertaining to irrigation of the Public Works Department for the welfare of the Backward Classes in the Bombay State and showing the benefits derived by the Backward Classes from the irrigation schemes during the year under review viz. 1952-53..

NORTH GUJARAT CIRCLE.

In the scheduled areas in North Gujarat Circle, the work of improving the Gam Tank at Laxmipura, taluka Khedbhrama, district Sabarkantha was taken up during the year under report. This tank had breached many years ago probably due to inadequate provision of waste weir. It was therefore proposed to close the breach, to provide adequate waste weir, to raise and strengthen the existing bank and to provide a gate for existing outlet etc. The work was started in October 1952 and completed in March 1953 at a cost of Rs 13,854 from rupees one crore Loan Programme. The tank will irrigate about 76 acres of land.

SOUTH GUJARAT CIRCLE.

There are 85 acres of lands belonging to Scheduled Castes in Vyara Taluka of Surat District out of which 12-33 acres of Scheduled Castes owned land, get benefit of irrigation from Doswada dam-chikhli Bandhara and Canal. There are no lands owned by the Scheduled Caste people of Songadh Taluka of Surat District. Lands belonging to Scheduled Castes of six villages in Chorasi Taluka and 32 villages in Olpad Taluka of Surat District get benefit from minor irrigation tanks in charge of the Revenue Department. In Dohad Taluka of Panch Mahals District, the benefits of irrigation are availed of by the Backward Class people, as the irrigators in this taluka belong to Backward Classes.

GUJARAT IRRIGATION CIRCLE.

During the year under report, the benefits derived by The Backward Class people from the various irrigation schemes in the Gujarat Irrigation Circle, are detailed as shown below :—

AHMEDABAD IRRIGATION DIVISION.

Name of work.	Number of Acres.
(i) Hathmati and Khari Cut Canals	364
(ii) Meshwa Canal including Galki and Goblej tanks ...	777
(iii) Fatewadi Eight Months Canal including the inter-connecting channels to bund system	888
(iv) Vijapur Tubewells Scheme	195

BARODA IRRIGATION DIVISION.

(v) Wadhvana Tank including Jojwa Orsang Main Canal	139-2
(vi) Seven tanks in Baroda District (six tanks in Savli Taluka and one in Waghodia Taluka of Baroda District)	100-21
Total	2,513-23

BOMBAY CIRCLE.

In the Bombay Circle, no specific benefits were derived by the Backward Class people from any irrigation schemes, during the year under report.

DECCAN IRRIGATION CIRCLE.

In the Deccan Irrigation Circle, the following are the areas belonging to Backward Class irrigators who derived benefits of irrigational facilities during the year under report :—

Name of Canal.	Acreage of land
(i) Godavari Right Bank Canal	2,525
(ii) Godavari Left Bank Canal	1,218
(iii) Girna Left Bank Canal	781
(iv) Kadwa Canal	1,117
(v) Pravara Left Bank Canal	737
(vi) Pravara Right Bank Canal	210
(vii) Visapur Tank and Canal	27
(viii) Nira Right Bank Canal	4,516
(ix) Nira Left Bank Canal	4,023
(x) Mutha Canals	518
Total	15,672

CENTRAL CIRCLE.

In West Khandesh District, the Nawapur Taluka, the Akkalkuva Taluka the Akarani Mahal and part of the Taloda Taluka are declared as Schedule Area by Government. The activities done by the Public Works Department in this area, in respect of irrigation works, during the year under report, are shown below :—

Serial No.	Name of work.	Taluka.	Expenditure during 1952-53. Rs.
1.	Special Repairs to Bandhara and Channel at Tilsav	Nawapur	2,802
2.	Special Repairs to Bandhara on Sarai Nalla at Khanapur.	Nawapur	2,580
	Total		5,382

No irrigation work was carried out in the Schedule Area of East Khandesh District, during the year under report. There are no scheduled areas in Satara, Sholapur and Poona Districts.

KARNATAK IRRIGATION CIRCLES

In the Karnatak Irrigation Circle, no specific irrigation schemes for the welfare of the Backward Class people were taken up, during the year under report.

SOUTHERN CIRCLE.

In Kolhapur Division, an area of about 110 acres 3 gunthas belonging to the Backward Class people of Kolhapur and South Satara Districts was benefitted by irrigation schemes incharge of the Kolhapur Division and by the Bandharas incharge of Revenue Department during the year under report. Since most of the lands belonging to the Backward Class people are out of the command area of the irrigation works, more area could not be benefitted from irrigation schemes. The details of the area irrigated during the year under report are as under :—

Serial No.	Name of Scheme.	Villages benefitted.	Area irrigated.	
1	2	3	4	
Acres guntha				
<i>Kolhapur District.</i>				
1	E. I. Scheme, Kolhapur ...	Valivade, Chinchwad Ingali, Dharangutti Terwad and Shivadhan.	21	15
2	Bandhara at Wathar-Turf-Wadgaon...	Wathar-Turf-Wadgaon	1	33
<i>South Satara District.</i>				
3	Chikhali Canal ...	Kadepur and Shivani ...	10	4
4	Bandhara at Balgavade on Goregaon Nalla, taluka Tasgaon.	Balgavade	20	0
5	Bandhara at Ped, taluka Tasgaon ...	Ped	3	10
6	Bandhara at Shalgaon, taluka Khanapur.	Shalgaon	1	25
7	Bandhara No. I at Bhikavadi, taluka Khanapur.	Bhikavadi	14	2
8	Bandhara No. II at Bhikavadi, taluka Khanapur.	Bhikavadi	4	23
9	Bandhara at Mangrul, taluka Khanapur.	Mangrul	9	20
10	Bandhara at Alsund, taluka Khanapur	Alsund	11	2
11	Bandhara at Dhavaleshwar, taluka Khanapur.	Dhavaleshwar	2	7
12	Bandhara at Shivani, taluka Khanapur.	Shivani	10	22
Total			110	3

In the remaining divisions in this Circle, no irrigation works were carried out during the year under report for the welfare of the Backward Class people.

A Note on Major and Medium Irrigation Projects included in the First Five-Year Plan which are under execution in the Bombay State.

Providing additional irrigation facilities to step up food production is one of the first concerns of the Government and so of the Department. In addition to the existing ones, provision has therefore, been made for the construction of the following major and medium irrigation schemes which have been included in the First Five-Year Plan and are briefly reviewed as under :—

(i) *The Mahi Right Bank Canal Project (Stage 1).*—The project consists of a pick-up-weir, 2,450 feet long at Wanakbori across the Mahi river in Kaira District and Right Bank Canal of about 44 miles in length. The project is expected to irrigate 1.5 lakhs acres in Kaira District at an estimated cost of Rs. 426 lakhs. The project is in progress and is anticipated to be completed in 1957. An expenditure of about 45.75 lakhs of rupees was incurred on this project to end of 1952-53.

(ii) *Kakrapar Weir and Canals Project.*—The project consists of a diversion weir at Kakrapar about 50 miles upstream of Surat with a system of canals commanding a gross area of 8,00,000 acres estimated to cost Rs. 626 lakhs. The scheme is expected to irrigate 6,52,000 acres in Surat District. The work is being executed by the Central Water and Power Commission. The scheme is in progress and is expected to be completed in 1955. The total length of canals and channels is about 850 miles. On full development an increased yield of 1½ lakhs tons of food grains and 16,000 tons of cotton is expected. An expenditure of about 287.76 lakhs of rupees was incurred on this project to end of 1952-53.

(iii) *The Gangapur Storage Project.*—The project consists of an earthen Dam near Gangapur on the Godavari river upstream of Nasik town to store 5,500 million cubic feet of water in first Stage and 7,200 Million cubic feet in final Stage. The Dam will be 12,500 feet long and 123 feet high above river bed, or 140 feet above foundations at its depest. The top width of the Dam will be 30 feet. It is proposed to utilise the above storage by constructing Nasik Left Bank Canal of 24 miles and remodelling the existing Godavari Canals. About 45,000 acres of land will be irrigated in Nasik and Ahmednagar Districts yielding 8,100 tons of additional foodgrains. The cost of the sanctioned project is Rs. 334 lakhs and the target date of completion is 1956. The construction work of the Dam is mostly by machinery. The work is in progress. The work turned at with a comparative low strength of manual labour is economical as compared with the cost of earthen Dams constructed mostly with manual labour. An expenditure of about 196.61 lakhs of rupees was incurred on this Project to end of 1952-53.

(iv) *The Ghataprabha Left Bank Canal Project.*—This project which is a part of the Ghataprabha Valley Development Scheme consists of the first 44 miles of the Ghataprabha Left Bank Canal and two Branches 31 miles in length. The canal takes off from the left flank of the existing

weir across the river at Ghataprabha near Dhupdal and will, when completed, irrigate 1,20,000 acres in Belgaum and Bijapur Districts. The Canal is designed to carry 1,500 cusecs with a full supply depth of 8 feet initially and the masonry works are being built in such a way as to enable 2,000 cusecs to be passed in second Stage. The project is sanctioned for Rs. 5.45 crores and is expected to be completed by 1956. The first eight miles of the Canal were completed and opened for irrigation in June 1951. The construction of the scheme is not mechanized and most of the work is done by manual labour only. The work is in progress. An expenditure of about 196.47 lakhs of rupees was incurred on this Project to end of 1952-53.

(v) *Ranand Tank Project.*—The project comprises of an earthen Dam of 3,580 feet long and 63 feet high and an over flow waste weir 1,085 feet long to discharge the monsoon floods. The project is expected to irrigate 3,550 acres in North Satara District at an estimated cost of about Rs. 21.5 lakhs. The work is in progress and is expected to be completed in 1954. An expenditure of about 12.23 lakhs of rupees was incurred on this project to end of 1952-53.

(vi) *Kolchi Weir Scheme.*—The Scheme consists of a submersible weir across the Malaprabha river near Ramdurg and a canal about 10 miles long. It is estimated to cost Rs. 20.41 lakhs and irrigate 3,700 acres in Belgaum District. The work is in progress and is expected to be completed in 1955. An expenditure of about 16.26 lakhs of rupees was incurred on this project to end of 1952-53.

A Short Note on Minor Irrigation Works and North Gujarat Tube Wells Scheme in the Bombay State.

MINOR IRRIGATION WORKS.

In the interest of "Grow More Food Campaign," Government has under execution since 1947-48, a big programme of Minor Irrigation Works estimated to cost about Rs. 225.04 lakhs.

Under this programme, during the year 1952-53, 701 works were completed and these are expected to irrigate about 68,000 acres of land. Up to the end of April 1953, there were 175 works in progress and these are expected to irrigate about 65,000 acres of land. The total expenditure on these works during the year was Rs. 52.09 lakhs.

NORTH GUJARAT TUBE WELLS SCHEME.

With a view to aid the "Grow More Food Programme," this Department has taken up the Scheme to sink 400 tube wells in the Ahmedabad, Mehsana and Banaskantha Districts at an estimated cost of Rs. 210 lakhs. Each tube well will irrigate about 200 acres of land. The Scheme is expected to be completed by end of March 1956. Expenditure of about Rs. 40 lakhs was incurred till 31st March 1953.

STATEMENT

Statement of area irrigated by irrigation works

No.	Name of Work.	Area irrigated			
		Kharif.	Rabi.	Total.	Flow.
1	2	3	4	5	6
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.					
PRODUCTIVE.					
1	Gadikeri Tank	423A	.....	423A	423A
2	Mavinkop Tank	573A	.....	573A	573A
3	Ekrnk Tank	2,874* (2,030)	4,517* (4,182)	7,391* (6,212)	7,338* (6,159)
4	Shahada Channel	1,441* (1,325)	1,737* (1,806)	3,178* (3,131)	3,178* (3,131)
	Total, Productive	996 3,355	5,988	996A 9,343	996A 9,290
UNPRODUCTIVE.					
5	Hatbmati and Kharj Cut Canals	3,154 14,151	1,816 441	4,970 14,592	4,920 10,600
6	Wangroli Tank	2,097	.....	2,097	1,891
7	Savli Tank	2,126	.....	2,126	2,126
8	Wadhvana Irrigation Tank including Jojura Main Canal.	4,249	1,854	6,103	6,103
9	Tranza Nagrama Tanks	154	7	161	133
10	Futelo Tank	234	275	509	509
11	Nira Left Bank Canal	56,750 (32,527)	24,644* (37,643)	81,394* (90,170)	80,619
	Shetphal Tank	3,951* (2,670)	2,388* (3,638)	6,339* (6,308)	6,339
12	Nira Right Bank Canal	34,412* (35,287)	36,402* (43,362)	70,814* (78,649)	70,207
13	Mutha Canals	10,600* (8,730)	2,084* (2,707)	12,684* (11,446)	12,530
	Matoba Tank	1,991* (1,992)	951* (1,521)	3,942* (3,513)	2,942

I-E.

in the State of Bombay during the year 1952-53.

in acres.	Double cropped.		Average discharges, Cubic Feet per Second.			
	Area irrigated.	Percentage of Total Area.	At Head		Utilized.	
			Kharif.	Rabi.	Kharif.	Rabi.
7	8	9	10	11	12	13
.....
.....
53*	7,319*	.....	16·43	26·45	16·43	26·45
(53)	(6,212)	.....			
nil.	3,178*	.....	17·69	23·28	17·69	23·28
	(3,131)	.....			
53	9,343	.....			
50	.....	.....	166	49	71	48
3,992	.....	.....	151	22	151	22
206	.....	.....	152·65	.....	152·65	.....
.....	.....	.....	96·13	.....	96·13	.....
.....	.....	.....	I } 10	6		
.....	.....	.....	II } 25	10		
.....	.....	.....	III } 40	15		
.....	.....	.....	IV } 30	5		
.....	.....	.....	V } 20	5		
28	.....	.....	.....	.....	.....	.....
.....	.....	.....	12·25	.....	12·25	.....
775	1,143	1·3	394	452	228	318
.....	.....	.....	19	27	10	27
606	925	1·17	548	634	340	479
145	.....	.....	157	107	91	66
.....	.....	.....	15	25	15	25

STATEMENT

No.	Name of Work.	Area irrigated per Cubic Foot per Second.			
		Discharged at Head.		Utilized.	
		Kharif. 14	Rabi. 15	Kharif. 16	Rabi. 17
1	2				
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.					
PRODUCTIVE.					
1	Gadikeri Tank	.....	.....	.....	.....
2	Mavinkop Tank	.....	.....	.....	.....
3	Ekrak Tank	62	102	62	162
4	Shahada Channel	.....	.....	.....	.....
	Total, Productive	.....	.....	.....	.....
UNPRODUCTIVE.					
5	Hathmoti and Khari Cut Canals	19 94	37 20	72 94	38 20
6	Wengrolitank	14	.....	14	.....
7	Savlitank	22	.....	22	.....
8	Wadhvana Irrigation Tank including Jojwa Main Canal.	1,275	675	.....	.....
9	Tranza-Nagrama Tanks	.....	.....	.....	.....
10	Futelo Tank	2·38	20·29	2·38	26·29
11	Nira Left Bank Canal	83	127	143	181
	Shetphal Tank	141	135	141	135
12	Nira Right Bank Canal	64	68	90	85
13	Mutha Canals	56	25	96	41
	Matoba Tank	133	61	133	61

I.V. contd.

Base to which the Duties of Water are calculated.		
Khar f.	Rabi.	Remarks.
18	19	20
		A—Area wholly under consolidated assessment.
15th June 1951 to 15th November 1951.	16th November 1951 to 14th February 1952.	
15th June 1952 to 14th October 1952.	15th October 1952 to 14th February 1953.	
15th June to 15th November	16th November to 14th February	
15th February 1952 to 14th October 1952.	15th October 1952 to 14th February 1953.	
Do.	Do.	
Do.	Do.	

STATEMENT

No.	Name of Work.	Area irrigated				
		Khariif.	Rabi.	Total.	Flow.	
1	2	3	4	5	6	
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT— <i>contd.</i>						
UNPRODUCTIVE— <i>contd.</i>						
14	Shirsuphal Tank	206* (255)	1,077* (3,020)	1,333* (1,275)	1,333* (1,275)	
15	Bhadalwadi Tank ... ..	.....	207* (207)	207* (207)	207* (702)
	Lake Beale—Darna Dam ... ..	.....	.....	.....	.....
16	Godavari Right Bank Canal	21,612* (12,761)	10,583* (19,587)	32,195* (32,348)	29,848	
	Godavari Left Bank Canal	19,242* (10,931)	7,249* (13,772)	26,491* (24,703)	23,229	
17	Chankapur Tank—Girna Canal	12,832* (8,090)	5,538* (6,663)	18,370* (14,653)	18,370	
18	Kadwa River Works {	Waghad Tank {	1,226* {	555* {	1,781* {	1,752 {
		Palkhed Canal {	(933) {	(1,261) {	(2,194) {	
		Ojhar Tambat Canal {	1,068 {	206* {	1,274* {	
		Wadali Canal {	(635) {	(660) {	(1,295) {	1,268 {
		703	601	1,324	1,243	
		(634)	(952)	(1,586)		
19	Pravara River Works. {	Pravara Right Bank Canal. {	11,715* {	7,915* {	19,630* {	19,340 {
		(9,387) {	(12,793) {	(22,180) {		
		32,270* {	37,253* {	69,523* {	60,523 {	
		(21,905) {	(36,883) {	(58,788) {		
20	Bhatodi Tank	107* (97)	308* (294)	415 (391)	415	
21	Mhaswad Tank and Branch No. III of the Nira Right Bank Canal.	6,007* (3,157)	5,463* (3,513)	11,470* (6,670)	11,462* (6,662)	
22	Parsul Tank	1,264* (1,108)	51* (218)	1,255* (1,326)	1,255*	
23	Meshwa Canal	3,112	2,664	5,776	5,234	
24	Ashti Tank	282* (213)	1,136* (878)	1,418* (1091)	1,418* (1,091)	
25	Pathri Tank	177* (105)	1,345* (1,135)	1,522* (1,240)	1,519* (1,240)	

I-E—contd.

in acres.			Average discharges, Cubic Feet per Second.			
Lift.	Double cropped		At Head.		Utilized.	
	Area irrigated.	Percentage of Total Area.	Kharif.	Rabi.	Kharif.	Rabi.
7	8	9	10	11	12	13
.....	1,333 (3,275)	.....	8·9	8·8	4·25	5·28
.....	207 (207)	.....	.....	8·8	.....	5·28
2,347	780 (207)	2·4	234	209	143	125
3,262	842	3·4	138	133	109	106
.....	.....	.....	81	96	63	80
29	.....	.....	21	25	21	25
6	.....	.....	9	6	9	6
81	.....	.....	91	15	9	15
290	1,050	4·7	133	118	128	118
870	1,407	2·4	409	417	409	417
.....	.....	.....	5	22	5	22
8 (8)	11,470* (6,670)	.....	37	39	37	39
.....	.....	.....	3	0·4	3	0·4
542	.....	.....	54	24	54	24
.....	1,418* (1,091)	.....	61	3	61	3
3* (0)	1,522* (1,240)	.....	1	9·6	1	9·6

STATEMENT

No.	Name of Work.	Area irrigated per Cubic Foot per Second.				
		Discharged at Head.		Utilized		
		Kharif. 14	Rabi. 15	Kharif. 16	Rabi. 17	
1	2					
	WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT— <i>contd.</i>					
	UNPRODUCTIVE— <i>contd.</i>					
14	Shirsuphal Tank	29	122	58	204	
15	Bhadelwadi Tank ... ..	.....	23	.....	39
16	Lake Beale—Darna Dam					
	Godavari Right Bank Canal	55	94	99	167	
	Godavari Left Bank Canal	79	104	100	130	
17	Chankapur Tank—Girna Canal	100	68	128	82	
18	Kadwa River Works {	Waghad Tank. ....	.....	.....	.....
		Palkhed Canal.	44	50	44	50
		Ojhar Tambat Canal.	71	110	71	110
		Wadali Canal.	70	63	70	63
19	Pravara River Works {	Pravara Right Bank Canal.	71	108	73	108
		Pravara Left Bank Canal.	54	88	54	88
20	Bhatodi Tank	19	13	19	13	
21	Mheswad Tank and Branch No. III of the Nira Right Bank Canal.	90	35	90	35	
22	Parsul Tank	369	545	369	545	
23	Meshwa Canal	58	111	58	111	
24	Ashti, Tank	191	293	191	293	
25	Pathri Tank	84	118	84	118	

I-E—contd.

Base to which the Duties of Water are calculated.		Remarks.
Kharif.	Rabi.	
18	19	20
15th February 1952 to 14th October 1952.	15th October 1952 to 14th February 1953.	
Do. ...	Do. ...	
15th February 1952 to 14th October 1952.	15th October 1952 to 14th February 1953.	
Do. ...	Do. ...	
Do. ...	Do. ...	
Do. ...	Do. ...	
Actual number of days for which the Canal was flowing for irrigation— 15th October 1952 to 14th October 1952.	February 1953.	
Actual number of days for which the Canal was flowing for irrigation— 15th June 1951 to 15th April 1951. 15th October 1952 to 14th October 1952.	16th November 1951 to 14th February 1952. February 1953	
Do. ...	Do. ...	

STATEMENT

No.	Name of Work.	Area irrigated			
		Kharif.	Rabi.	Total.	Flow.
1	2	3	4	5	6
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT—concl'd.					
UNPRODUCTIVE—concl'd.					
26	Jamda Canals	4,254* (3,521)	3,023* (2,648)	7,277* (6,172)	7,277* (6,172)
27	Mhaswa Tank	6*	.....	6*	6*
28	Lower Panjhra River Works	(6) 2,379*	..... 597*	(6) 2,976*	(6) 2,976*
29	Krishna Canal	(2,340) 6,448*	(565) 3,962*	(2,905) 10,340*	(2,905) 9,147*
30	Rovari Canal	(4,138) 207*	(2,865) 247*	(7,263) 454*	(6,470) 454*
31	Upper Man River Works	(193) 166*	(122) 710*	(515) 876*	(315) 870*
32	Yerla River Irrigation Works	(153) 1,521*	(410) 3,166*	(533) 4,027*	(559) 454*
33	Chikhli Canal	(1,360) 277	(2,844) 256	(4,204) 533	(4,129) 533
34	Maini Tank	608* (500)	804* (712)	1,412* (1,212)	1,392* (1,231)
35	Gokak Canal—First Section and Storage Works	9,401	6,752	16,143	16,120
36	Muchkundi Tank ... ..	.....	.....	.....	.....
37	Dambal Tank	170 (a)144	271	441 (a)144	585
38	Medleri Tank	205	66	271	240
39	Madag Tank	650	159	809	809
40	Asundi Tank	8	3	11	11
41	Dharma Canal	1130 8,648A	..... 182A	1,130 8,648A	1,130
42	Ghataprabha Left Bank Canal	795	166(c)	795	795
43	Vijapur Tube Wells	992	1,802	2,794	.....
Total, Unproductive		2,07,455 8,792(a)	2,34,569 182(A)	4,42,064 8,974(a)	4,22,759
Grand Total, Productive and Unproductive		2,10,790 9,788 (A)	2,40,557 166 182	4,51,347 166 9,970	4,33,685
		2,20,578	2,40,005	4,61,483	

I-E—contd.

in acres.			Average discharge, Cubic Feet per Second.			
Lift.	Double cropped.		At Head.		Utilized.	
	Area irrigated.	Percentage of Total Area.	Kharif.	Rabi.	Kharif.	Rabi.
7	8	9	10	11	12	13
.....	7,277*	.....	69	48	69	48
.....	(6,172)	.....	3.42	.....	3.42	.....
.....	6*	.....	.....	.....	.....	.....
.....	(6)	.....	.....	.....	.....	.....
.....	2,978*	.....	2.23	.....	2.23	.....
.....	(2,905)	.....	.....	.....	.....	.....
1,493*	10,640*	.....	60.59	61.76	60.59	61.76
(783)	(7,203)	.....	.....	.....	.....	.....
.....	454*	.....	3.08	2.20	3.08	2.20
.....	(315)	.....	.....	.....	.....	.....
6*	876*	.....	12	15	12	15
(4)	(563)	.....	.....	.....	.....	.....
85*	4,627*	.....	27	40	27	40
(75)	(4,204)	.....	.....	.....	.....	.....
.....	.....	.....	5.7	8.43	2.62	4.25
.....
20*	1,412*	.....	21.20	26.10	21.20	26.10
(11)	(1,242)	.....	.....	.....	.....	.....
223	.....	.....	111.5	87.17	111.5	87.17
.....
.....	.....	.....	1.95	3.09	1.95	3.99
.....
22	.....	.....	1.75	1.96	1.75	1.96
.....
.....	.....	.....	28.52	19.18	28.52	19.18
.....
.....	.....	.....	1.59	1.59	1.59	1.59
.....
.....	.....	.....	103.46	9.72	103.46	9.72
.....
.....	.....	.....	10.2	5.9	10.2	5.9
.....
2,794	.....	.....	.....	.....	.....	.....
17,099	39,240	.....	.....	.....	.....	.....
17,152	48,583	.....	.....	.....	.....	.....

STATEMENT

No.	Name of Work.	Area irrigated per Cubic foot per Second.			
		Discharged at Head.		Utilized.	
		Kharif. 14	Rabi. 15	Kharif. 16	Rabi. 17
1	2				
	WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT—concl'd.				
	UNPRODUCTIVE—concl'd.				
26	Jamda Canals	61	63	61	63
27	Mhaswa Tank	1·6	.....	1·6	.....
28	Lower Panjhra River Works ... ..	.....	.....	.....	.....
29	Krishna Canal	92	59	92	59
30	Revvari Canal	63	55	63	55
31	Upper Man River Works	13	29	13	29
32	Yerla River Irrigation Works	56	78	56	78
33	Chikhli Canal	1·5	0·57	3·00	1·15
34	Maini Tank	25	28	25	28
35	Gokak Canal—First Section and Storage Works.	77·6	101·8	77·6	101·8
36	Muchkundi Tank ... ..	.....	.....	.....	.....
37	Dambal Tank	161·02	67·92	161·02	67·92
38	Medleri Tank	117·14	33·07	117·14	33·07
39	Madag Tank	22·79	8·29	22·79	8·29
40	Asundi Tank	5·03	116·35	5·03	116·35
41	Dharma Canal	94·51	.....	94·51	.....
42	Ghataprabha Left Bank Canal	71·5	25·4	71·5	25·4
43	Vijapur Tube Wells ... ..	.....	.....	.....	.....
	Total, Unproductive				
	Grand Total, Productive and Unproductive				

-E-*concl'd.*

Base to which Duties of Water are calculated.		Remarks.
Kharif.	Rabi.	
18	19	20
15th February 1952 to 14th October 1953.	15th October 1952 to 14th February 1953.	
Do.	Do.	*These figures are of area assessed.
Do.	Do.	
Do.	Do.	
Do.	Do.	
Do.	Do.	
15th February to 14th October.	15th October to 14th February.	
15th February 1952 to 14th October 1952.	15th October 1952 to 14th February 1953.	
15th June to 14th October ...	15th October to 14th February.	
.....	.....	There was no irrigation during the year as there was no demand from irrigators.
15th February to 14th October.	15th October to 14th February.	(a) Area under consolidated assessment.
15th February to 14th October.	Do.	
15th June to 14th October ...	Do.	
15th February to 14th October.	Do.	
15th June to 14th October ...	Do.	
15th June 1952 to 14th October 1952.	Single Watering	No. of days for which the canal in flow—Kharif 02 Rabi 22. This is a Tube Well Scheme and Water is pumped out and supplied for irrigation.
.....	.....	(c) Single Watering.

STATEMENT

Statement showing Water Rates per acre in force during

No.	Name of Work.	Water			
		Irrigation in blocks.	Perennial.	Early eight months.	Monsoon four months.
1	2	3	4	5	6
	Works for which Capital and Revenue Accounts are kept.	Rs.	Rs.	Rs.	Rs.
	PRODUCTIVE				
	SOUTHERN CIRCLE.				
1	Gadikari Tank*	..	..	..	..
	KARNATAK IRRIGATION CIRCLE.				
2	Mavinkop Tank*	..	..	..	..
	CENTRAL CIRCLE.				
3	Ekruk Tank (aa)	..	M 52½		
4	Shahada Channel (a)	..	B 26½ B 28 M 42	B 12 10	C 4 8 B 5 4 5
	UNPRODUCTIVE.				
	GUJARAT IRRIGATION CIRCLE.				
5	Hathmati Canal (a³)	..	..	..	D 10
	Khari Cut Canal (a³)	..	..	..	E 15
6	Vijapur Tube Wells Scheme (a⁴)	..	..	..	Gallons 10,500
7	Wadhvana Irrigation Tank	..	..	..	A 5½ A¹ 3½ H 1½
	NORTH GUJARAT CIRCLE.				
8	Wangroli Tank (a²)	..	..	..	D 5
9	Savli Tank (a²)	..	..	..	F 2½ D 5
10	Tranza Nagrama Tanks (a²)	..	..	..	F 4 D 4 F 2
	SOUTH GUJARAT CIRCLE.				
11	Futelsao Tank (a¹)	..	..	..	D 4 F 2
	DECCAN IRRIGATION CIRCLE.				
12	Nira Left Bank Canal including Shetphal Tank (d)	G¹ 37	M² 90 C¹ 120 B² 45 N 28-8-0 P 128	M⁴ 13 M³ 15	5

I-F.

1952-53 on Irrigation Works in the Bombay State.

Rates.			Single Watering.	Occupier's rate.	Owner's rate.	Water Advantage.
Rabi four months.	Hot Weather.	Miscellaneous.				
7	8	9	10	11	12	13
Rs.	Rs.	Rs.	Rs.			
...	...	...	...	Nil.	Nil.	Nil.
...	"	"	"
C 7-8 B 9 8	C 10-8 B 12 10	...	3 3	"	"	"
10	12	...	4	"	"	"
per rapce	plus Rs. 50	per acre for	cash crops as	per (h).	...	...
G 7 H 3½	...	K 14 L 7	@	...	@	...
4	6	...	1½	Nil.	Nil.	Nil.
4	6	...	1½	"	"	"
4	6	...	1	"	"	"
A ² 3 a ⁶ 2 F 2	5	...	1	"	"	"
8	12	(A ⁴) 7½	(a ⁴) 3	"	"	"

STATEMENT

No.	Name of Work	Water			
		Irrigation in blocks.	Perennial.	Early eight months.	Monsoon four months.
1	2	3	4	5	6
	UNPRODUCTIVE— <i>contd.</i>	Rs.	Rs.	Rs.	Rs.
	DECCAN IRRIGATION CIRCLE— <i>contd.</i>				
✓ 13	Nira Right Bank Canal (d) (p) ...	G ¹ 37	M ² 90 C ¹ 120 B ² 45 N 28 8 0 P 128	M ⁴ 13 M ² 15	5
14	Mutha Canals and Matoba Tank (d) (p) Sugarcane under the Mutha Canals within the Poona City and Suburban Municipal and Cantonment limits or within one mile of those limits.	No Cane Blocks	99	...	...
	On all remaining land commanded by both the canals.	...	90	M ⁴ 13	5
	Pan gardens ...	...	123	M ² 15	...
	Perennial crops other than sugarcane and pan gardens.	...	45	...	...
	Matoba Tank ...	...	90	...	...
15	Godavari Right Bank Canal (d) (p) } ...	G ¹ 37	M ² 90 B ² 45 C ¹ 120 N 28 8 0 P 128	M ⁴ 13 M ² 15	5
	Godavari Left Bank Canal (d) (p) }				
16	Chankapur Tank—Girna Canal (d) (p) ...	G ¹ 37	M ² 90 B ² 45 C ¹ 120 N 23 8 0 P 128	M ⁴ 13 M ² 15	5
17	Kadwa River Works (d) (p) ...	No cane blocks	M 120 B 45	M ⁴ 13 M ² 15	5
	Waghad Tank ...				
	Palkhed Canal ...				
	Ojhar-Tambat Canal ...				
	Wadali Canal ...				
✓ 18	Pravara Canals (d) (p) ...	G ¹ 37	P 128 M ² 90 B ² 45 C ¹ 120 N 28 8 0	M ⁴ 13 M ² 15	5
19	Bhatodi Tank (d ¹) ...	...	M 37 B 18½	10	4
20	Parsul Tank (a ²) (p) ...	No block	B 14 M 28	✓	3
	CENTRAL CIRCLE.				
21	Shirsuphal Tank (a) ...	...	42	13	5
22	Bhadalvadi Tank (a) ...	...		
23	Jamda Canals (a) ...	...	42	13	5

I-E—contd.

Rates.			Single Watering.	Occupier's rate.	Owner's rate.	Water Advantage.
Rabi four months.	Hot Weather.	Miscellaneous.				
7	8	9	10	11	12	13
Rs.	Rs.	Rs.	Rs.			
8	12	(b ⁴) 7½	(a ¹) 3	Nil.	Nil.	Nil.
...	"	"	"
8	12	(b ⁴) 7½	(a ¹) 3	"	"	"
...	"	"	"
...	"	"	"
...	"	"	"
8	12	(b ⁴) 7½	(a ¹) 3	"	"	"
8	12	(b ⁴) 7½	(a ¹) 3	"	"	"
8	12	(b ⁴) 7½	(a ¹) 3	"	"	"
8	12	(b ⁴) 7½	(a ¹) 3	"	"	"
6	7½	(b ⁴) 5	(a ¹) 2	"	"	"
5	6	(b ⁴) 4	(a ¹) 2	"	"	"
8	10	...	3	"	"	"
8	10	...	3	"	"	"

STATEMENT

No.	Name of Work.	Water			
		Irrigation in blocks.	Perennial.	Early eight months.	Monsoon four month's
1	2	3	4	5	6
UNPRODUCTIVE—concl'd.					
CENTRAL CIRCLE—cont'd.		Rs.	Rs.	Rs.	Rs.
24	Mhaswa Tank(a) ...	...	42	13	5
25	Lower Panjhra River Works (a) ...	...	M 42 B ¹ 28 B ² 42		5
26	Ashti Tank (aa) ...	...		
27	Pathri Tank (aa) ...	...	M ¹ 42		
28	Mhaswad Tank (aa) ...	...	B ¹ 21	B ¹ 12	4-8-0
29	Krishna Canal (ab) ...	...	M 42 B ¹ 21	13	5
30	Rovari Canal (ab) ...	...		
31	Upper Man River Works (ab) ...	...	M 42 B ¹ 21	13	5
32	Yerla River Irrigation Works (ab) ...	...		
33	Majni Tank (ab) ...	...		
SOUTHERN CIRCLE.					
34	Muchkundi Tank (ad) ...	...	M 10	(y) 5	(m)2
35	Dambal Tank (w) ...	...	M 18-11-0	(y) 8 (z) 10	(m)5-5-0
36	Chikhli Canal (ae) ...	...	M 42 B 21	(y) 13	(m)5
KARNATAK IRRIGATION CIRCLE.					
37	Gokak Canal, 1st Section and Storage Works (u).	...	40	(e) 10	4
38	Medleri Tank (b ¹) ...	...	18-11-0		
39	Madag Tank (b ¹) ...	...	16	(y) 8 (z) 10	(m)5-5-0
40	Asundi Tank (b ¹) ...	...	18-11-0		
41	Dharma Canal (b ²) ...	...			(m)6
42	Ghataprabha Left Bank Canal (u) ...	...	40	(u) 10	4

I-F—concl'd.

Rates.			Single Watering.	Occupier's Rate.	Owner's Rate.	Water Advantage.
Rabi, four month.	Hot Weather.	Miscellaneous.				
7	8	9	10	11	12	13
Rs.	Rs.	Rs.	Rs.			
8	10	.....	3	Nil.	Nil.	Nil.
8	10	.....	3	"	"	"
(e)7-8	(e)9	.....	(e)3	"	"	"
8	10	.....	3	"	"	"
8	10	.....	3	"	"	"
(n)2	(e)5	.....	1	"	"	"
(n)6	(f)9-	.....	(j)1-5-0 (k)2-11-0	"	"	"
(g)8	(l)10	(j)3	(f)5	"	"	"
6	15	(r)25	5 (b ⁵) 2½ (b ⁴)	"	"	"
(n)6	(l)9-5-0	.....	(g)1-5-0 (k)2-11-0	"	"	"
.....	.....	.....	(g)1-8-0 (k)3-0-0	"	"	"
6	15	(r)25	{ 5 (b ⁵) 2½ (b ⁴) }	"	"	"

Note.—(1) For lift irrigation on canals and distributaries half the ordinary rates are charged. When water is lifted by moats and 3/4 the ordinary rates for lift by power pumps.

(2) Double or treble the ordinary rates are charged as penal rates for taking water without permission.

(3) Leakage or percolation rates are the same as ordinary rates, except as provided for under Government orders issued in Government Letters No. 2036/36, I.B.(I) of 28th April 1950 and No. 9840/36 I.B.(I) of 28th April 1950.

(4) In the Deccan Irrigation Circle, the only exception to the rates prescribed in (d) is Belapur Company in the old area for which they are entitled to a rate of Rs. 80 per acre for cane on form VII.

(5) Special single water rate is Rs. 2-0-0 for maintaining crops *vide* G. R., P. W. D., No. 1759 of 15th July 1906, in the Karnatak Irrigation Circle.

(6) *Ghataprabha Left Bank Canal Division—Karnatak Irrigation Circle :—*

(i) Tur when sown as mixed crop with any kharif crop in the monsoon season shall be charged the monsoon rates plus the single water rate for the post-seasonal watering that may be required in the cold weather season.

(ii) In the case of pomegranate (perennial 8 months), if water is supplied during the period from 15th June to 31st December, it should be charged at the rate of Rs. 9-8-0 per acre.

(iii) When San is grown along with maize the water rates for this mixed crop should be Rs. 2-8-0 per acre. When San is grown for manurial purposes only, the water rates should be Re. 1 only per acre.

(iv) For irrigation by lift by moats worked by bullocks and for irrigation by lift by power pumps, the water rates should be half and three-fourths of the flow rates, respectively.

*Lands wholly assessed at consolidated rates.

**For single watering for crops for which no application for irrigation throughout the season was received.

***Single seasonal rate for the season as for crops other than rice during which water is taken, shall be levied.

A—For Fine Rice.

A1—For Coarse Rice.

A2—For Ordinary Crops.

B—For perennial crops other than sugarcane.

B1—For Other Perennial Crops.

✓ B2—The rates for other perennial crops in and outside blocks.

B3—For Bananas.

C—For Bhusar.

C1—The rate for cane outside blocks.

D—For Rice.

E—For crops other than rice.

F—For other Kharif Crops.

G—For wheat.

G1—For 1 : 3 Cane Blocks.

H—For Vasal.

K—For Vegetable, garden, Fruits, etc.

L—For Sundhia.

M—For Sugarcane.

M1—For Perennial Crops.

M2—The rates for cane in blocks, for over-laping cane and for Sugar Companies' cane on volumetric supply.

✓ M3—For Two Seasonal Block.

✓ M4—For food and fodder Block.

N—For Pomegranates.

P—For Pan Garden.

(c)—Two-seasonal 8 months.

(d)—These are the rates increased by 50 per cent. over the rates sanctioned under G. R., P. W. D. No. 929/36 of 18th May 1945, with effect from 15th February 1952 *vide* G. L., P. W. D., No. 2177/48 I-B (1) of 20th February 1950.

(d¹)—Rates sanctioned in G. R., P. W. D., No. 929/36 of 18th May 1945 and are continued up to 14th February 1953 *vide* G. L., P. W. D., No. WTR. 1551-I of 18th September 1952.

(f)—Pre-seasonal watering in the case of two season crops.

(g) 15th June to 14th October.

(h) Rs. 50 per acre for cash crops i.e., (1) cane, (2) Fruit trees, (3) vegetables, (4) Kharif, (5) Rabi (c) hot weather, (4) Wariali, (5) Tobacco, (6) Cotton, (7) Jira, (8) Sarsan with effect from 1st September 1953.

(j)—For any crop or tilling ground on any day during the period from 15th June to 14th October.

(k)—For any crop or tilling ground on any day during the period from 15th October to 14th June.

(l)—From 15th February to 14th June.

(p)—For water rates please see para 1 of G. R., P. W. D., No. WTR/1551 of 10th August 1951 and the notice issued by S. E., D.I.C. in April 1950.

(m)—For four months from 15th June to 14th October or 15th July to 30th November.

(t)—From 15th October to 14th June.

(n)—From 15th October to 14th February.

(r)—for perennial 8 months.

(u)—Rates sanctioned in G. R., P. W. D., No. 1604/36-II, dated the 11th April 1950, are applicable up to 14th February 1953.

(w)—Rates sanctioned in G. R., P. W. D., No. 2933/48, dated the 3rd February 1951.

(x)—For twelve months (15th February to 14th February).

(y)—For 8 months from 15th June to 14th February.

(z)—For 8 months from 15th October to 14th June or 1st August to 31st March.

a—Rates sanctioned *vide* G. R., P. W. D., No. WTR. 1051, dated 15th January 1952, for the period upto 14th February 1954.

(a¹) Post-seasonal except for monsoon crops.

a²—Rates sanctioned as per G. L., No. WTR. 2152-I, dated the 23rd February 1953.

a³—For restorative crops grown after rice.

a⁴—Rates sanctioned *vide* G. R., P. W. D., No. 920/36 of 31st May 1945, and extended upto 14th February 1954 as per G. L., P. W. D., No. WTR. 1551-I, dated 10th August 1953.

a⁵—Rates sanctioned from 15th June 1952, *vide* G. R., P. W. D., No. WTR. 2151, dated 17th March 1952.

(b¹)—Rates sanctioned in G. R., P. W. D., No. 2933/48, dated the 3rd February 1951.

(b²)—Rate sanctioned in G. L. P. W. D. No. 4996/36-I-B(I), dated 28th December 1950.

(b³)—Pre-seasonal waterings from 1st May to 14th June.

(b⁴) For money crops in respect of Gokak Canal 1st section and Storage works and hataprabha Left Bank Canal.

(b⁵)—For other crops in respect of Gokak Canal 1st section and Storage Works and Ghataprabha Left Bank Canal.

ao—Rates sanctioned in G. R., P. W. D. No. WTR-1051, dated 22nd September 1951.

aa—Rates sanctioned in G. R., P. W. D., No. 2177/48, dated 14th April 1950.

ab—Rates sanctioned in G. R., P. W. D., No. 929/36, dated 9th February 1950.

a³—Rates sanctioned upto 14th June 1952 *vide* G. R., P. W. D., No. 4752/36, dated the 20th April 1950.

a⁴—Water is given on Volumetric basis, Rates sanctioned *vide* G. R., P. W. D., No. WTR. 1451, dated 16th March 1953.

Concessional water rate of 20,000 gallons per rupee be effective from 1st July 1952 to 30th September 1953 only *vide* G. R., P. W. D., No. WTR. 1451 dated the 16th January 1953.

@—As per G. R., P. W. D., No. 1915/48, dated the 7th October 1950.

ad—Rates sanctioned in G. R., P. W. D. No. 5594/36, dated 3rd April 1950.

ab—Rates are chargeable upto 14th February 1954 as per G. R., P. W. D., No. 3494/36, dated 14th December 1949.

Statement showing information regarding total area, culturable
Bombay State during

Serial No.	Name of District.	Total area of the District.	Culturable area.	Cultivated area.	Area
					Works for which Capital and Revenue Accounts are kept, i.e., First Class Irrigation Works.
1	2	3	4	5	6
		Acres.	Acres.	Acres.	Acres.
1	Banaskantha ...	27,30,564	17,61,384	16,18,920	Nil.
2	Sabarkantha ...	15,99,956	11,42,167	10,71,572	4,971
3	Mehsana ...	27,70,271	26,15,690	19,53,891	3,861
4	Amreli ...	9,88,233	6,94,837	5,95,759	199
5	Baroda ...	18,22,415	13,20,037	12,78,546	6,103
6	Ahmedabad ...	22,23,024	17,69,374	15,23,282	17,321
7	Kaira ...	16,61,750	13,38,979	13,38,979	11,351
8	Panchmahals ...	22,40,768	12,60,970	10,81,496	509
9	Broach ...	18,77,888	12,48,192	10,23,232	Nil.
10	Surat ...	14,71,039	8,70,361	8,69,203	Nil.
11	Dan _o s ...	4,22,700	44,642	40,235	Nil.
12	Bombay Suburban ...	41,900	23,000	Not available.	Nil.
13	Thana ...	24,08,231	9,87,116	7,35,532	Nil.
14	Kolaba ...	16,94,715	9,61,994	4,76,616	Nil.
15	East Khandesh ...	28,76,300	20,67,600	19,78,800	6,718
16	West Khandesh ...	39,79,900	19,51,400	17,69,500	5,257
17	Nasik ...	38,29,317	21,43,490	21,13,579	36,656
18	Ahmednagar ...	42,01,788	28,79,604	28,42,869	1,35,002
19	Poona ...	38,36,806	25,52,335	25,07,667	94,400
20	Sholapur ...	37,03,300	32,50,300	30,55,100	1,00,858
21	North Satara ...	25,98,400	19,11,300	17,09,500	35,478
22	South Satara ...	21,29,693	18,39,200	18,22,076	6,188

area, cultivated area and area irrigated in each District in the
the year 1952-53.

Works for which neither Capital nor Revenue Accounts are kept.							Total area irrigated (column 6 plus column 12).	Remarks, if any.
Tanks	Bandhas.	Lift Irrigation.		Other sources.	Total (columns 7 to 11).	13		
		Wells.	Other Lift Irrigation Works.					
7	8	9	10	11	12	13	14	
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.		
1,222	Nil.	1,02,898	Nil.	9,057	1,13,177	1,13,177		
1,349	Nil.	92,874	Nil.	233	94,456	99,427		
1,312	Nil.	2,07,002	14,895	Nil.	2,23,209	2,27,070		
192	Nil.	871	Nil.	Nil.	1,063	1,262		
2,811	Nil.	Nil.	Nil.	2,108	4,919	11,022		
7,040	12,020	60,686	1,079	24,466*	1,05,291	1,22,612	*This includes the figure of 21,259 acres which pertains to Fate-wadi Canal inter-connecting Channels to bund system.	
17,843	3,913	1,59,990	9,164	1,551	1,92,461	2,03,812		
12,638	Nil.	16,202	Nil.	74	28,914	29,423		
3,839	Nil.	Nil.	Nil.	Nil.	3,839	3,839		
14,034	1,735	8,258	2,005	5,396	31,428	31,428		
Nil.	Nil.	7	10	7	24	24		
Nil.	Nil.	532	Nil.	Nil.	532	532		
Nil.	Nil.	63	Nil.	2,538	2,601	2,601		
Nil.	278	2,181	Nil.	Nil.	2,459	2,459		
Nil.	247	Nil.	Nil.	Nil.	247	6,965		
288	30,391	29,866	77	553	61,175	66,432		
278	27,353	45,504	Nil.	1,363	74,408	1,11,154		
2,238	Nil.	1,32,678	Nil.	1,176	1,36,092	2,71,694		
1,461	4,382	47,336	2,133	20,902	76,214	1,70,704		
1,137	Nil.	1,54,095	442	336	1,56,010	2,56,868		
817	27,987	57,974	Nil.	178	86,956	1,22,434		
Nil.	6,006	79,594	165	25,686	1,11,451	1,17,639		

Serial No.	Name of District.	Total area of the District.	Culturable area.	Cultivated area.	Ar
					Works for which Capital and Revenue Accounts are kept, i.e., First Class Irrigation Works.
1	2	3	4	5	6
		Acres.	Acres.	Acres.	Acres.
23	Ratnagiri ...	31,09,283	17,68,328	8,03,415	Nil.
24	Kolhapur ...	17,31,496	12,83,400	9,41,101	Nil.
25	Belgaum ...	35,42,987	27,24,044	23,34,473	17,627
26	Bijapur ...	42,31,488	36,52,647	35,37,367	Nil.
27	Dharwar ...	34,02,085	29,83,335	27,50,050	11,636
28	Kanara ...	25,26,785	3,27,524	2,61,500	573
	Grand Total ...	6,96,53,082	4,73,73,250	4,20,34,260	4,95,398

under irrigation in respect of

Works for which neither Capital nor Revenue Accounts are kept.

Tanks.	Bandhas.	Lift Irrigation.		Other sources.	Total (columns 7 to 11).	Total area irrigated (column 6 plus column 12).	Remarks if any.
		Wells.	Other Lift Irrigation Works.				
7	8	9	10	11	12	13	14
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
1,303	Nil.	19,906	7,012	5,051	33,272	33,272	
667	Nil.	3,919	8,511	10,891	23,988	23,988	
10,436	15	70,000	Nil.	13,837*	94,288	1,11,915	*This includes an area of 457 acres which pertain to tank bed cultivation of Dhupdal Reservoir.
2,949	970	(d) 69,076	3,469	2,551	79,015	79,015	(c) Area under private wells.
98,485	37	(c) 3,885	Nil.	3,846	1,06,253	1,17,889	(d) includes area under private wells.
34,493	4,094	Nil.	Nil.	6,576	46,063	46,630	
2,16,832	1,20,328	13,65,397	48,962	1,38,376	18,89,895	23,85,293	

Statement showing capacity, replenishment received, supply used for irrigation, and Tanks) for which Capital and Revenue Accounts are kept and. Minor Bombay for the

Serial No.	Name of tank.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M.Cft. above outlet sill up to full level.
1	2	3	4	5
NORTH GUJERAT CIRCLE.				
MAJOR IRRIGATION WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.				
1	(a) Tranza Tank	.....	9.32'	70.97
	(b) Nagrama Tank	1.5 (Direct) 13.0 (Indirect for both).	7.5'	97.14
2	Wangroli Tank	13.0	15.44'	213.0
3	Savli Tank	11.0	14.60'	172.27
MINOR IRRIGATION TANKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.				
4	Kanowal Tank	.....	4.5' to 6.5'	166.88
5	Saiat Tank	12.5	.....	.....
6	Chimnabai Sarovar	32.9 Indirect.	34'	632.1
7	Thol Tank	60.0 Indirect.	12'	447.0
8	Ambli Pipardi Tank	0.66	4'	5.75
9	Chandrasar Tank	21.0	8'	42.5

area irrigated, revenue assessed, etc., in respect of Irrigation Storage Works (Lakes Irrigation Tanks in charge of the Public Works Department, in the State of year 1952-53.

Rainfall in inches during monsoon, rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste weir over flow and the over flow in M. Cft.	Total replenishment received (columns 7 plus 8).
6	7	8	9
25.75"	Not filled maximum level. Not filled at all	..... .....	30.24 M.Cft.
29.06"	3rd August 1952 R. L. 199.48.	.....	.....
29.15"	8th August 1952 R. L. 172.27.	3 days 2.42 M.Cft.	.....
19.50"	Filled by 2nd August 1952. Capacity 166.88 M.Cft.	14 days 591.74 M.Cft.	166.88 M.Cft.
.....
36.40"	On 18th September 1952. Water level was 26.55 ft.	Nil	237.85
17.78"	Tank is not filled due to breaches.	Nil	Nil
18.64"	Not filled above R. L.	Nil	Nil
13.38"	Not filled above R. L.	Nil	Nil

Serial No.	Name of tank.	Date when the level fell to outlet sill or the lowest level in case of carry over and the date of this level.	Details of crops irrigated.	Kharrif.
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
NORTH GUJERAT CIRCLE				
MAJOR IRRIGATION WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.				
1	(a) Traunza Tank ...	14th October 1952.	Paddy, Cotton, Bavto, Juwar.	(i) 154 (ii) 30.24 M.Cft.
	(b) Nagrama Tank ...	.....	.....	.....
2	Wangroli Tank	2nd November 1952.	Paddy, Bavto, Bajri, Kodra, Cotton, Sunddia, etc.	(i) 2,097.0 (ii) 152.65 M.Cft.
3	Savli Tank	26th October 1952.	Do.	(i) 2,126.0 (ii) 96.13 M.Cft.
MINOR IRRIGATION TANKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.				
4	Kanewal Tank ...	8th April 1953 ...	Paddy, Bavto, Bajri, Kodra, Cotton, Sunddia, etc.	(i) 598.0 (ii) 95.0 M.Cft.
5	Saint Tank .....	.....	.....	.....
6	Chimnabai Sarovar ...	22nd June 1953. Water level was 10.90 feet.	Wheat, Sarsav, Gram and Pulse.	.....
7	Thol Tank ...	Nil	Seasonal Rice	(i) 78.4 Irrigation done from Local Depress tank.
8	Ambli Pipardi Tank ...	Nil	Nil	Nil
9	Chandrasar Tank ...	Nil	Rice	35.4 Irrigation done from Local Depress in tank.

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue Assessed.	Working expenses.	Remarks.
Area irrigated in acres and supply consumed in M.Cft.	Area irrigated in acres and supply consumed in acres.				
13	14	15	16	17	18
			Rs. a. p.	Rs.	
(1) 7 by lift.	161	1,698 0 0	6,556	
.....	1,698	
.....	(i) 2,007	12,229 0 0		
.....	(ii) 152.65 M.Cft.		7,378	
.....	(i) 2,126	13,413 0 0		
.....	(ii) 96.13 M.Cft.		7,202	
(i) 368.0	(i) 966	5,053 0 0	.....
(ii) 72.0 M.Cft.	(ii) 167.0 M.Cft.	.....	.....
.....	The tank is in breached condition hence no information is given.
(i) 1,174.70	(i) 1,174.70	8,447 0 0	22,645	
(ii) 187.75 M.Cft.	(ii) 187.75 M.Cft.			
.....	78.4	206 0 0	2,814	
Nil	Nil	Nil	Nil	845.0	
.....	35.4	266 0 0	845.0	

Serial No.	Name of tank.	Catchment area in square miles.	Full supply of gauge above outlet sill.	Capacity in M.Cft. above outlet sill up to full level.
1	2	3	4	5
NORTH GUJARAT CIRCLE. MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT— <i>contd.</i>				
10	Vatrasar Tank ...	Nil	9'	11.2
11	Gomati Tank ...	12.0	11-0'	83.51
12	Badi Padwa Tank ...	23.50	22'	87.34
13	Kumbhnath Tank ...	4.25	10'	34.29
14	Mota Aknadia Tank ...	10.0	12'	67.50
15	Mota Bhandaria ...	15.75	6'	70.1
16	Dhamel Fatasar Tank ...	6.25	7'	70.38

Rainfall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M.Cft.	Total replenishment received (columns 7 + 8).
6	7	8	9
15.42"	2.5 feet above sill level on 27th August 1952.	Nil	Nil
18.46"	The tank was filled completely on 20th July 1953 at R. L. 134.	18.8 M.Cft.	83.52 M.Cft.
15.0"	The tank was filled up to F. S. L. on 15th August 1952.	Nil	87.34 M.Cft.
20.0"	20th June 1952 R. L. 281.2.	0.42 M.Cft. on 21st June.	35.01 M.Cft.
9.0"	On 22nd July 1952 R. L. 489.5 (8.5 feet).	.....	.....
10.0"	.....	Tank is in breached condition.	.....
20.0"	Nil	Nil	Nil

Serial No.	Name of tank.	Date when the level fell to outlet sill or the lowest level in case of carry over and the date of this level.	Details of crops irrigated.	Kharif.	
					Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11		12
NORTH GUJARAT CIRCLE.					
MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT—contd.					
10	Vatrasar Tank	... 1st September 1952.	Guwar	...	.....
11	Gomati Tank	... 20th July 1952 ...	Bajri, Wheat.	Juwar.	(i) 123 Acres (ii) 27·0 M.Cft.
12	Badi Padwa Tank	... 20th April 1953 ...	Wheat, Millo, Ground-nuts, Grams, etc.	Juwar.	(i) 110·0 (ii) 25·0 M.Cft.
13	Kumbhnath Tank	... October 1952 ...	Wheat, Rice.	Juwar.	(i) 15·0 (ii) 12·96 M.Cft.
14	Mota Aknadia Tank	... ..	Nil	... Nil	...
15	Mota Bhandaria	...	Tank is in breached condition.		
16	Dhamel Fataasar Tank	... Nil ...	Nil	... Nil	...

Rabi. Area irrigated in acres and supply consumed in M.Cft. 13	Hot weather. Area irrigated in acres and supply consumed in M.Cft. 14	Total area irrigated in acres and supply consumed in M.Cft. 15	Revenue Assessed. 16	Working expenses. 17	Remarks. 18
.....	.....	.....	Rs. a. p. 76 0 0	Rs. 2,385	
.....	.....	(i) 123 Acres (ii) 27.0 M.Cft.	146 0 0	2,217	
(i) 87.0 (ii) 27.0 M.Cft.	110.0 35.3 M.Cft.	(i) 308.0 (ii) 87.38 M.Cft.	1,454 0 0	4,288	
(i) 50.0 (Consumption is not available).	(i) 10.0	(i) 75.0	1,000 0 0	1,250	
Nil.	Nil.	Nil.	Nil.	1,250	
				1,250	Tank is in breached condition.
Nil.	Nil.	Nil.	Nil.	1,250	

Serial No.	Name of Tank.	Catchment area in square miles.	Fully supply gauge above outlet sill.	Capacity in M. Cft. above outlet sill up to full level.
1	2	3	4	5
NORTH GUJARAT CIRCLE. <i>—contd.</i> MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT—contd.				
17	Pichvi Tank ...	22.75	18.0'	215.70
18	Timba Tank ...	6.5	10.60'	78.10
19	Vank and Daloli Tanks ...	10.5	4' to 6' (App.).	13
20	Wadoo Tank ...	4.5	4' to 6' (App.).	3.5
21	Mehmedabad Tank ...	7.0	4' to 6' (App.).	10.10
22	Vavys Tank ...	1.24	4' to 6' (App.).	3.36

Rainfall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M. Cft.	Total replenishment received (columns 7 + 8).
6	7	8	9
31.8"	27th June 1952 ... R. L. 260.	.....	.....
25.76"	Filled up to F. S. L. 107.00 on 5th August 1952.	Nil	78.10 M. Cft.
19.50	Tanks except 19 and 20 not filled, water was below sill and irrigation done by lift.	No rain gauge is maintained.	
19.50	Do. ...	Do. ...	.....
19.50	Do. ..	Do. ...	.....
19.50	Do. ...	Do. ...	.....

Serial No.	Name of tank.	Date when the level fell to outlet sill or the lowest level in case of carry-over and the date of this level.	Details of crops irrigated.	Khariff.
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
NORTH GUJARAT CIRCLE —contd.				
MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT—contd.				
17	Pichvi Tank ...	October ...	Wheat, Juwar, Sugarcane, etc.	(i) 80·8 (ii) 62·33 M.Cft.
18	Timba Tanks ...	1st March 1953 ...	Wheat and Gram.	.....
19	Vank and Daloli Tanks ...	.....	Paddy— 181-10 122-23	181-10 122-23 M. Cft. 15-0
20	Wadoo Tank ...	.....	Paddy— 25-18	25-18 2-5 M. Cft.
21	Mehmedabad Tank ...	.....	Paddy— 195-8	195-8 14-6 M. Cft.
22	Vavys Tank ...	.....	Paddy— 43-37	2-7 2-7 M. Cft.

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.
13	14	15	16	17	18
			Rs. a. p.	Rs.	
(i) 35.7 (ii) 25.50 M.Cft.	(i) 15.4 (ii) 5.30 M.Cft.	(i) 131.90 (ii) 93.13 M.Cft.	1,000 0 0	1,250	
(i) 359.0 (ii) 48.40 M.Cft.	.....	(i) 359.0 (ii) 48.40 M.Cft.	1,100 0 0	2,980	
.....	.....	181-10 122-23	816-2 491-1	590	
.....	.....	25.18	60	M. and R. grant. 77	
.....	.....	195.8	877.14	205	
.....	.....	43.37	199.	150	

Serial No.	Name of tank.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M.Cft. above outlet sill up to full level.
1	2	3	4	5
SOUTH GUJARAT CIRCLE.				
23	Futelao tank ...	19.10	17' above outlet sill.	56.5 M.Cft.
24	Muwalia Tank ...	30	24 15' above outlet sill.	212 M.Cft. at R. L. 120.00
				(1) 237 M.Cft. at R. L. 115.00.
25	Dowwada Dam, Chikhali Bandhara and canals.	24	10 ft. sill R. L. 378.00 F. T. L. R. L. 395.00	74 M. Cft.
26	Bandharpada Pick-up Weir ...	7	Level not available.	Nil. It is a pick-up weir and storage capacity is not there. Natural available flow of nala is being utilised for irrigation.
GUJARAT IRRIGATION CIRCLE.				
WORKS FOR WHICH REVENUE AND CAPITAL ACCOUNTS ARE KEPT.				
27	Wadhvana Irrigation Tank ...	.....	180.00 F.S.L.	396.60 M. Cft.

Rainfall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M. Cft.	Total replenishment received (columns 7 +8).
6	7	8	9
24.80 inches	... 29th July 1952 up to R. L. 107.30.	29th July 1952 to 9th August 1952. M.Cft. 71.2.	128 M. Cft.
27.28 inches	... 29th July 1952; R. L. 142.65 M. Cft. 237.	20th July 1952 to 8th August 1952 and 24th August 1952 to 30th August 1952. M. Cft. 2,960.	3,017 M. Cft.
45.34 inches	... Not available. It is a storage weir and remains full in monsoon.	.....	.....
No gauge maintained	... ..	July to March discharge not known.	.....
27.15 inches	... R. L. 176.70; 4th October 1952; 220.57 M. Cft.	Not measured	397.46 M. Cft.

Serial No.	Name of tank.	Date when the level fell to outlet sill or the lowest level in case of carry over and the date of this level.	Details of crops irrigated.	Kharif.
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
SOUTH GUJARAT CIRCLE.				
23	Futelo tank ...	1st February 1953 R. L. 91.0.	Perennials... Nil 8 months ... 13-3 Kharrif sea-220-30 sonal. Rabi sea-275-25 sonal. Hot weather Nil. Miscel- Nil. laneous. 509-18	233 33 21 00 M. C.ft.
24	Muwalia Tank ...	31st January 1953 at R. L. 115.00.	Perennials... 8-30 8 months ..418-28 Kharrif sea- 910-18 sonal. Rabi sea-1,570-7 sonal. Hot weather 2-0 seasonal. Miscel- 247-39 laneous. 3,158-2	1,518-35 82 M. Cft.
25	Doswada Dam, Chikhali Bandhara and canals.	Generally the tank gets emptied in month of May.	Perennial ... 83.0 2-seasonal 29.0 (Kharif and Rabi).	Kharif 848-0 Perennial 83 926 acres. 33 M. C.ft.
26	Bandharpada Pick-up Weir ...	.....	A. g. Perennial 6-0 8 months Nil Seasonal ... 34 Kharif ... 33 Rabi ... 1	33 Acres. 3 M. C.ft. approx. (Seasonal).
GUJARAT IRRIGATION CIRCLE.				
WORKS FOR WHICH REVENUE AND CAPITAL ACCOUNTS ARE KEPT.				
27	Wadhvana Irrigation Tank ...	15th November 1952.	Seasonal	... 4,349 0 268.11 M.Cft.

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue Assessed.	Working expenses.	Remarks.
Area irrigated in acres and supply consumed in M.Cft.	Area irrigated in acres and supply consumed in M.Cft.				
13	14	15	16	17	18
			Rs. a. p.	Rs.	
A. g. 275-25 26·00 M.Cft.	Nil.	A. g. 509-18 47·00 M.Cft.	1,286 15 0	11,018	
1,639-7 149 M. C.ft.	Nil.	3,158-2 231·00 M.Cft.	9,963 0 0	25,447	
177 0 24 M. C.ft. 2 Seasonal 29 Rabi 148	.....	1,103 0 57 M. Cft.	16,812 0 0	16,014	
Perennial 6 Seasonal 1 7 0 0·4 M. Cft. approx.	Nil.	40 0 3 4 M. Cft.	645 0 0	1,104	
1,854 0 129·35 M.Cft.	.....	6,103 0 397·46 M.Cft.	37,606 0 0	36,219	

Serial No.	Name of work	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M. Cft. above outlet sill up to supply level.
1	2	3	4	5
GUJARAT IRRIGATION CIRCLE— <i>contd.</i>				
MINOR IRRIGATION TANKS (WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT).				
28	Goblej ...	6	76.50	123
29	Galki ...	4½	6.9 New Tank, 7.3 Old Tank.	50.
30	Karachia ...	4.5	186	95.96
31	Javla ...	3.70	168.50	28.72
32	Vadadla ...	6.50	192.00	80.32
33	Haripura ...	3.6	216.00	56.00
34	Sarsi ...	3.44	103.00	32.62
35	Muval ...	7.50	187.00	131.51
36	Shripore Tiabi ...	6.0	188.00	68.00

Rainfall in inches during (a) Monsoon, (b) Rabi and (c) Hot weather and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste- weir overflow and the overflow in M.Cft.	Total replenishment received (columns 7 + 8).
6	7	8	9
24 inches	6th August 1952 Level 78.50	Not measured	137.5 M.Cft.
24 inches	Full tank level was first reached on 5th August 1952. R. L. 100.	Do.	224.43 M.Cft.
} 31.42"	R. L. 185.40; 25th July 1952; 27.63 M. Cft.	Do.	.....
	R. L. 172.50; 89.59 M Cft.; 30th July 1952.	Do.	32.52
	R. L. 193.00; 80.32 M. Cft.; 10th August 1952.	Do.	62.03
	R. L. 211.50; 25.71 M. Cft.; 10th August 1952.	Do.	39.23
	R. L. 102.80; 10th Au- gust 1952; 29.70 M.Cft.	Do.	26.91
28.36	R. L. 185; 26th July 1952; 85 M. Cft.	Do.	.....
	R. L. 120.50; 29th July 1952; 69.40 M. Cft.	Do.	45.84

Serial No.	Name of work.	Date when the level fell to outlet sill or the lowest level in case of carry-over and the date of this level.	Details of crops irrigated.	Kharif.
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
	GUJARAT IRRIGATION CIRCLE—contd. MINOR IRRIGATION TANES (WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT).			
28	Goblej	Date 30th November 1952. Level below sill.	Seasonal	2,122 Acres. 126 M.Cft.
29	Galki	Lowest level in Kharif—New 3·6 Old 3·7 gauges. Lowest level in Rabi.—New 0·7 Old 0·6 gauges.	Do.	871 M.Cft. 120·16
30	Karachia ... ..	.....	.....	.....
31	Javia	15th November 1952.	Seasonal	339 0 32·52 M.Cft.
32	Vadadia	3rd January 1953	Do.	537 0 44·8 M.Cft.
33	Haripara	3rd January 1953	Do.	235 0 16·17 M. Cft.
34	Sarsi	15th November 1952.	Do.	373 0 26·91 M. Cft.
35	Muval ... ..	.....	.....	.....
36	Shripore Timbi	3rd November 1952	Seasonal	421 0 22·40 M.Cft.

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.
13	14	15	16	17	18
			Rs. a. p.	Rs,	
216 Acres ... 10·5 M.Cft.	One Acre ... 007 M.Cft.	2,399 Acres ... 137·2 M.Cft.	24,133 0 0	3,321 82,651	(MR) (Remodelling).
327 15 M.Cft.	Nil.	1,198 Acres ... 135·16 M.Cft.	12,163 0 0	2,466	(MR)
.....	.....	.....	.....	6,269	Tanks from Serial Nos. 24 to 29 are in Savli Taluka and the rain gauge station being at Savli, the rainfall measured at Savli is 31·42 inches.
.....	.....	339 0 32·52 M. Cft.	1,775 0 0	29,086	
276 0 18·23 M. Cft.	.....	813 0 62·03 M. Cft.	4,191 0 0	5,556	
101 0 4·06 M. Cft.	.....	336 0 33·23 M. Cft.	1,530 0 0	14,490	
.....	.....	373 0 26·91 M. Cft.	1,288 0 0	11,285	
.....	.....	.....	.....	7,958	
529 0 23·44 M. Cft.	.....	950 0 45·84 M. Cft.	4,000 0 0	4,026	

Serial No.	Name of Tank.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M.Cft. above outlet sill up to full level.
1	2	3	4	5
	SOUTHERN CIRCLE.			
	IRRIGATION STORAGE WORKS FOR WHICH CAPITAL ACCOUNTS ARE KEPT.			
37	Gaddikeri Tank ...	4.68	10'	27.50
<i>Note.</i>	Total acres assessed under consolidated assessment under the Gaddikeri Tank is 423 acres i.e.			
38	Muchkandi Tank ...	26	Outlet sill R.L. 1785.94.	571.62 M.Cft.
39	Dambal Tank ...	43	F.S.L. 145.30 R.L. outlet sill 125.00 R.L. silted bed 136.70 R.L.	96.70 M.Cft.
	MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT IN CHARGE OF PUBLIC WORKS DEPARTMENT.			
40	Rajaram Tank ...	Natural $\frac{1}{2}$ square miles 2 square miles of feeder channels.	29.5'	26.72 M.Cft.
41	Wadgaon Tank ...	2.27 square miles	28.00'	119 M.Cft.
42	Rankala Tank ...	Not known	Not known	Not known
43	Nandargi Tank ...	10 square miles	Outlet sill R.L. 187.00.	212 to 187-25'
44	Makhanapur Tank ...	15 square miles	Outlet sill R.L. 62.00.	Outlet sill 62.00 H.F.L. 88.00 26'.

Rainfall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M.Cft.	Total replenishment received (columns 7 + 8).
6	7	8	9
30" average during the year. Since no rain-gauge is maintained, rainfall during monsoon and rabi is not furnished. area under cultivation 418	Not known ...	Not known ...	Not known ...
Monsoon 16.34. Rabi 3.00". Year 19.34 (from January 1952 to December 1952).	Tank was not filled. Maximum level was reached to R.L. 1796.34 on 21st October 1952. Shortage being 131 M. Cft.	No overflow of waste weir.	131 M.Cft.
Monsoon 22.40. Rabi 3.01. Year 25.41.	Tank filled on 8th October 1952. Maximum level of water 145.70 on 8th October 1952.	8th October 1952 to 14th October 1952 34.34 M.Cft.	131.04 M.Cft.
33"	25'-11" on 5th September 1952.	Waste weir did not flow...	18.70
Not available	23.00'	35 days	Not known ...
32-43"	11'-5" on 24th October 1952.	Waste weir did not flow...	Not known ...
Monsoon 5.30". Rabi 2.80". Year 1952 8.10".	9th August 1952 R.L. 198.20.	No overflow of waste weir.	17.78 M.Cft.
Not known	18th October 1952 R.L. 74.50.	Do.	40.13 M.Cft.

Serial No.	Name of Tank.	Date when the level fell to outlet sill or the lowest level in case of carry over and the date of this level.	Details of crops irrigated.	Kharif.
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
	SOUTHERN CIRCLE.			
	IRRIGATION STORAGE WORKS FOR WHICH CAPITAL ACCOUNTS ARE KEPT.			
37	Gaddikori Tank	Not known	Perennial 138 0 Kharif 280 0 <hr/> 418 0	423 acres. Supply consumed cannot be stated.
Note.	Total acres assessed under consolidated assessment under the Gaddikori			Tanks 423 acres i.e.
38	Muchkandi Tank	Lowest level on 28th August 1952 was at R.L. 1789.50.	Nil.	No irrigation there was no
39	Dambal Tank	Dried up on 1st April 1952.	Perennial 144 0 8 months 50 0 Kharif 120 0 Rabi 271 0 <hr/> 585 0	Perennial 144 Kharif 170 12.6 M.Cft.
	MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT IN CHARGE OF PUBLIC WORKS DEPARTMENT.			
40	Rajaram Tank	Level reached to outlet sill on 21st May 1952.	Kharif ... 31-39 Rabi ... 2-20 Hot-weather 51-26 <hr/> 86-5	31-39
41	Wadgaon Tank	Not known	Kharif ... 19-30 Rabi ... 7-30 Hot-weather 48-10 <hr/> 75-30	18-30 1-0
42	Rankala	Below C.B.L. 3rd June 1952.	Kharif ... 57-20 Rabi ... 25-10 Hot-weather 293-10 <hr/> 276-0	Two seasons. 57-20
43	Nandargi Tank	Lowest level on 24th May 1952 was at R.L. 192.00.	Kharif ... 91-0 Rabi ... 180-0 <hr/> 271-0	91 acres 2.97 M.Cft.
44	Makhanapur Tank	Lowest level on 24th May 1952 was at R.L. 68.40.	Kharif ... 72-0 Rabi ... 161-0 Hot-weather 23-0 <hr/> 256-0	72 acres 2.4 M.Cft.

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.
13	14	15	16	17	18
Area irrigated in acres and supply consumed in M.Cft.	Area irrigated in acres and supply consumed in M.Cft.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.
Nil.	Nil.	423 acres. Supply consumed cannot be stated.	Rs. a. p. 2,344 0 0	Rs. a. p. 244 0 0	
areas under cultivation during the year 1952-53 as demand from the irrigators.	418 acres	plus 5 acres	non-cultivated	= 423 acres.	
Perennial Rabi 144 321 15.1 M.Cft.	Perennial Hot-weather Nil 144 8.2 M.Cft.	585 acres 35.9 M.Cft.	Consolidated 920 Non-consolidated 2,184	2,079 0 0	
			3,104		
A. g. 2-26	A. g. 51-26	A. g. 86-5	8,235 8 0	2,722 4 6	
7-30	48-10	75-30	8,928 2 0	3,046 13 0	
25-10	293-10	376-0	43,749 14 0	6,159 3 0	
180 acres 5.40 M.Cft.	Nil.	271 acres 8.37 M.Cft.	1,210 0 0	2,920 0 0	
161 acres 4.86 M.Cft.	23 acres 0.69 M.Cft.	256 acres 7.95 M.Cft.	1,451 0 0	2,960 0 0	

Serial No.	Name of Tank.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M.Cft. above outlet sill up to full level.
1	2	3	4	5
45	<p>SOUTHERN CIRCLE—<i>contd.</i> MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT IN CHARGE OF PUBLIC WORKS DEPARTMENT—<i>contd.</i> Asangi Tank at Bagewadi (Bijapur Dn.).</p>	18.2 square miles...	Outlet sill R.L. 510.00.	15.5'
46	<p>KARNATAK IRRIGATION CIRCLE. Mavinkop tank ...</p>	6.25	110.50 (10.98 ft.)	43.75
47	<p><i>Note.</i>—Area under this tank is the supply consumed is not completely assessed at consolidated water rates and hence gauged. Asundi tank ...</p> <p>(A) Area under consolidated assessment: 182 acres.</p>	23	108.50 (9.50 ft.)	87.40 M.Cft.
48	Medleri tank ...	11	180.00 (15 ft.)	57.60 M.Cft.
49	Madag tank ...	540	1,877.73 (4.48 ft.)	54.63 M.Cft.
50	Dharma Canal ...	51	4.6 ft. Canal depth	It is not a storage reservoir.

Rainfall in inches during (a) Monsoon, (b) Rabi and (c) Hot weather during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached,	Periods of waste- weir overflow and the overflow in M.Cft.	Total replenishment received (columns 7 + 8).
6	7	8	9
Monsoon 9.96". Rabi 1.79". Year 11.75".	3rd October 1952 R.L. 525.50.	29th September 1952 to 7th November 1952.	49.2 M.Cft.
(a) 46.54 (b) 4.27 (c) — 50.81	The F. S. water level reached was on 29th July 1952 (43.75 M.Cft.).	The waste-weir over- flowed from 29th July 1952 to 25th August 1952 35.98 M.Cft. and 22nd, October 1952 to 25th October 1952.	79.71 M.Cft.
(a) 11.47 (b) 1.43 (c) 5.56 18.46	The tank did not fill up during the year under re- port. The max. level reached was at R. L. 104.80 on 22nd October 1952.	The waste-weir did not overflow during the year.	11.88 M.Cft.
(a) 11.72 (b) 4.85 (c) 6.58 23.15	The max. water level reached was at R. L. 180.50 on 13th Octo- ber 1952 (57.60 M.Cft.).	The waste-weir over- flowed from 13th Octo- ber 1952 to 24th October 1952. Overflow : 138.38 M.Cft.	195.98 M.Cft.
(a) 20.15 (b) 0.80 (c) 7.00 27.95	The tank was filled on 27th April 1952. (54.63 M.Cft.).	The waste-weir over- flowed from 27th April 1952 to 31st January 1953. 190.47 M.Cft.	293.60 M.Cft.
(a) 60.50 (b) 5.02 (c) 7.44 72.96	There is no storage re- servoir but simply a pick-up weir exists.	The waste-weir over- flowed on 22nd July 1952, 13th August 1952, 21st August 1952, 9th Octo- ber 1952 and 12th Octo- ber 1952. 981.54 M.Cft.	2,175.41 M.Cft.

Serial No.	Name of Tank.	Date when the level fell to outlet sill or the lowest level in case of carry over and the date of this level.	Details of crops irrigated.	Kharif.
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
	SOUTHERN CIRCLE—contd.			
	MINOR IRRIGATION WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT IN CHARGE OF PUBLIC WORKS DEPARTMENT—contd.			
45	Asangi tank at Bagewadi (Bijapur Dn.);	Water has not gone down below sill.	Kharif ... 46-0 Rabi ... 44-0 <hr/> 90-0	46 acres 1.1 M.Cft.
	KARNATAK IRRIGATION CIRCLE.			
40	Mavinkop tank	The lowest level reached was at R. L. 103.97 on 22nd May 1952. Outlet sill R. L. 100.00	Sugarcane ... Paddy ...	..... 554
47	Asunditank	The tank became empty in April 1952 and from January 1953.	Sugarcane. 1 Chillies ... 192 <hr/> 193	8 4.02 M.Cft.
48	Medleri tank	The lowest level reached was at R. L. 166.96 on 28th April 1952. Sill R. L. 165.00	Vegetable. 54 Paddy ... 155 Jowar ... 33 Navni ... 3 Tobacco... 26 <hr/> 271	203 18.36 M.Cft.
49	Madag tank	The lowest level reached was at R. L. 1877.15 on 26th April 1952. Sill R. L. 1873.25	Vegetables. 19 Paddy ... 555 Groundnut. 39 Gram ... 2 Chillies, } Onions, } 194 Garlic. } <hr/> 809	555 36.00 M.Cft.
50	Dharma Canal	Canal ceased to overflow from 8th November 1952.	(a) Paddy. 1,130 (b) Paddy. 8,148 (c) Garden crops. 500 <hr/> 9,778 P	9,778 1,193.87 M.Cft.
			(b) & (c); Area under consolidated assess	

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.	
Area irrigated in acres and supply consumed in M.Cft.	Area irrigated in acres and supply consumed in M.Cft.					
13	14	15	16	17	18	
44 acres 1 M.Cft.	Nil	90 acres 2·1 M.Cft.	Rs. 551	Rs. 2,133		
.....	19	19	} 2,478 {	.....	
.....	554		} 5,341 {		
		573				
3 182(A)	..... .....	193	} 1,881 {	..... 861	
4·54 M.Cft.	3·32 M.Cft.	11·88 M.Cft.				
66	2	271	2,342	1,093		
21·04 M.Cft.	13·61 M.Cft.	53·01 M.Cft.				
159	95	809	4,960	4,546		
8·50 M.Cft.	4·00 M.Cft.	48·50 M.Cft.				
.....	.....	9,778	29,008	11,904	
		1,193·87 M.Cft.				
ment: 8,648 acres.						

Serial No.	Name of Tank.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M. Cft. above outlet sill up to full level.
1	2	3	4	5
KARNATAK IRRIGATION CIRCLE— <i>contd.</i>				
<i>Gokak Canal</i>				
51	Dhupdal Storage Reservoir ...	1,089	*R. L. 2012.00 26.00	(i) 478 M.cft. Up to existing crest level of the weir. (ii) 1,094 Up to the crest of the temporary shutters.
52	Ghataprabha Left Bank Canal—Dhupdal Storage.	1,089	*R. L. 2012.00 26.00	Do. ...
(A) The figures of working expenses could not be shown as the whole Ghataprabha Left				
CENTRAL CIRCLE.				
53	Ekruk Tank ...	159	39.00	2,349 M.Cft.
54	Mhaswad Tank ...	480	24.00	1,538.38 M.Cft.

Rainfall in inches during (a) Monsoon, (b) Rabi and (c) Hot weather and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste- weir overflow and the overflow in M. Cft.	Total replenishment received (columns 7 + 8).
6	7	8	9
(a) 15.52 (b) 0.86 (c) 20.24	The tank was not filled to its F. S. L. i.e. R. L. 2012.00. The tank level reached its maximum *24.52 i.e. R. L. 2010.52. on 15th Dec- ember 1952. 814 M. Cft.	The waste-weir overflowed on 25th June 1952 to 7th July 1952, 17th July 1952, 7th October 1952, 9th October 1952. *78851 M. Cft.	5th July 1952, 8th July 1952, 29th August, 11th October 1952. *8146 M. Cft.
(a) 15.52 (b) 0.86 (c) 20.24	Do.	Do.	Do.
Bank Canal construction work is not completed.			
14.59	10th October 1952 37.14 ft. 2,035.63 M.Cft.	.....	1,488.16 M.Cft.
9.54	15th June 1952 18.00 ft. 796.60 M.Cft.	.....	1,181.00 M.Cft.

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.
13	14	15	16	17	18
Area irrigated in acres and supply consumed in M.Cft.	Area irrigated in acres and supply consumed in M.Cft.				
94	3	124	1,05,128 0 0	60,956	*Vide S. E., K.I.C.'s Letter No. R-2, dated 15th March 1954. (File NP 3/30923).
4	.....	27			
9	49	92			
.....	.....	1,640			
2,368	2	3,800			
2,188	115	4,401			
.....	.....	627			
.....	.....	194			
.....	.....	402			
.....	.....	258			
.....	.....	168			
158	1	1,765			
.....	.....	2			
.....	.....	754			
975	.....	975			
816	.....	816			
140	.....	140			
6,752	170	16,243			
723 M.Cft.	Supply consumed in hot weather not possible to measure as river water from main weir and down weir were taken by lift irrigation.				
.....	.....	2	(A) 3,069 0 0		
.....	.....	21			
.....	.....	60			
.....	.....	243			
.....	.....	107			
.....	.....	41			
.....	.....	60			
.....	.....	20			
.....	.....	169			
.....	.....	1			
.....	.....	44			
.....	.....	27			
150	.....	795			
		150			
		945			
11 M.Cft.		92 M.Cft.			
4,517 Acres ...	1,244 Acres ...	7,391 Acres ...	3,71,242 0 0	47,188	
281·12 M.Cft.	167·57 M.Cft.	624·73 M.Cft.	57,433 0 0		
5,163 Acres ...	1,141 Acres ...	11,470 Acres ...	97,909 0 0	98,615	
412·00 M.Cft.	247·00 M.Cft.	1740 M.Cft.	92,836 0 0		

Serial No.	Name of Tank.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M.Cft. above outlet sill up to supply level.
1	2	3	4	5
CENTRAL CIRCLE— <i>contd.</i>				
55	Ashti Tank	92	22.00	1,064.29 M.Cft.
56	Pathri Tank	27.5	31.50	407.00 M.Cft.
57	Mhaswa Tank	13.45	22.00	153.09 M.Cft.
58	Shirsuphal Tank	23.5	31 ft.	$\begin{array}{r} 365.26 \\ -20.58 \\ \hline 344.68 \text{ M.Cft.} \end{array}$
59	Bhadalwadi	17.00	40.00 ft.	$\begin{array}{r} 268.20 \text{ M.Cft.} \\ -65.78 \text{ M.Cft.} \\ \hline 202.42 \text{ M.Cft.} \end{array}$
60	Nehr	59.59	32 ft.	411.40 M.Cft.
61	Pingli	20.29	29 ft.	103 M.Cft.
62	Mayani Tank	52.59	35 ft.	80.60 M.Cft.
63	Mukti Tank	34.22 square miles	29 ft.	320.03 M.Cft.

Rainfall in inches during Monsoon, Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M.Cft.	Total replenishment received (columns 7 + 8)
6	7	8	9
Mon. 11.29 8.03 Rabi 3.23	Not filled. Maximum gauge. 8.80 99.00 M.Cft. on 15th June 1952.	.....	177.00 M.Cft.
14.30 inches Monsoon 14.30 Rabi Nil.	25.70 height on 26th May 1952. Contents of water 255.26 M.Cft.	.....	140.76 M.Cft.
Monsoon 8.77 Rabi Nil. during the year 10.47	The tank did not fill up on 7th September 1952. 11.90 ft. 140.90 M.Cft.	.....	26.10 M.Cft.
Kharif 8.40 Rabi .70 9.10	Gauge on 19th October 1952. 25.10	.....	25.10 ft. 193.95 M.Cft.
Kharif 1.40 Rabi Nil. during year 1.40.	26.00 ft. on 8th October 1952.	.....	26.00 ft. 80.07 M.Cft.
Monsoon 20.87 Rabi 4.95 25.82	Maximum level 24.00 ft. on 10th August 1952.	The tank did not get full replenishment.	206 M.Cft.
Monsoon 5.33 Rabi .55 Total rainfall 5.88	Maximum level 22 feet on 22nd October 1952. Contents 45.15 M.Cft.	.....	62.15 M.Cft.
Monsoon 12.00 Rabi 0.15 Total 12.15	On 10th June 1952 Maximum contents 80.608	From 10th June 1952 to 16th February 1953 530 M.Cft.	610.618 M.Cft.
Monsoon 5.81 Rabi Nil. 5.81	The Tank was not filled 20th June 1952. 13.30 ft.	Nil.	10.1117 M.Cft.

Serial No.	Name of Tank.	Date when the level fell to outlet sill or the lowest level in case of carry-over and the date of this level.	Details of crops irrigated.	Kharif.
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
CENTRAL CIRCLE— <i>contd.</i>				
55	Ashti Tank	22nd March 1953. 3-93 0 M.Cft. 16th March 1952 3-93 0 M.Cft.	Hot Weather 113 Kharif Season 169 Rabi Season 1,136	169 Acres 9-07 M.Cft.
56	Pathri Tank	Lowest level 14-73 on 30th April 1953. 21-30 157-81 23rd May 1952.	Hot Weather 40 Kharif Season 137 Rabi Season 1,345	137 Acres 17-73 M.Cft.
57	Mhaswa Tank	The level did not fall to outlet sill 14th February 1953.	6 Acres	6 Acres -50 M.Cft.
58	Shirsuphal Tank	Lowest level on 10th March 1953 to sill level.	Hot Weather 255 Rabi Season 1,077	Nil.
59	Bhadalwadi	Lowest level on 17th November 1952 to sill level.	Hot Weather Nil. Kharif Season Nil. Rabi Season 206	Nil.
60	Nehr	15th December 1952.	Perennial 3 Monsoon 35 Seasonal 4,589	1,360 Acres 93-00 M.Cft.
61	Pingli	11th December 1952.	Perennial 1 Acre Monsoon 17 Acres Seasonal 858 Acres	153 Acres 17 M.Cft.
62	Mayani Tank	1st January 1952.	Perennial 33 Acres Monsoon 136 Acres Seasonal 1,243 Acres	500 Acres 40-30
63	Mukti Tank	13th June 1952 ... 12-24 ft.	Perennial 81 Acres Monsoon 178 Acres Seasonal 1,336 Acres	1,068 Acres

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.
Area irrigated in acres and supply consumed in M.Cft.	Area irrigated in acres and supply consumed in M.cft				
13	14	15	16	17	18
			Rs. a. p.	Rs.	
1,136 Acres ... 26·70 M.Cft.	113 Acres ... 3·71 M.Cft.	1,418 Acres ... 39·48	16,417 0 0 10,700 0 0	51,027	
1,345 Acres ... 102·36 M.Cft.	40 Acres ... 4·16 M.Cft.	1,522 Acres ... 124·25 M.Cft.	31,006 0 0 10,145 0 0	5,987	
.....	.....	6 Acres ... ·50 M.Cft.	487 0 0	866	
1,077 Acres ... 156·95 M.Cft.	255 Acres ... 37·00 M.Cft.	1,332 Acres ... 193·95 M.Cft.	11,830 00	13,178	
206 Acres ... 80·7 M.Cft.	Nil.	206 80·07 M.Cft.	2,315 0 0	10,051	
2,844 113·00 M.Cft.	.....	4,204 206·00 M.Cft.	39,019 0 0	40,609	
410 Acres ... 45·15 M.Cft.	.....	563 Acres ... 62·15 M.Cft.	7,608 0 0	19,120	
742 Acres ... 40·30	.....	1,242 Acres ... 80·80	11,927 0 0	4,115	
501 Acres ...	59 Acres ...	1,620 Acres ...	16,262 0 0	2,08,185	

Serial No.	Name of work.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M. Cft. above outlet sill up to supply level.
1	2	3	4	5
CENTRAL CIRCLE— <i>contd.</i>				
64	Wadshivane Tank ...	14.5	19.00	158.20
65	Hotgi Tank ...	23	14.00	169
66	Parewadi Tank ...	36.60	18.00	188.08
67	Gherdi Tank ...	16	20.00	102.85
68	Sangwi Tank ...	23.80	20.00	112.52
69	Koregaon Tank ...	7.00	16.00	83.47
70	Madanwadi Tank ...	41.00	22.00	201.00

Note.—The tanks at Serial Nos. 66, 67 and 70 are newly constructed and gauge

Rainfall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M. Cft.	Total replenishment received (columns 7+8).
6	7	8	9
Monsoon 7.90" Rabi Nil	On 29th September 1952 6.60". 14.44 M. Cft. Contents.	.....	M. Cft. 14.44
17.51"	On 30th September 1952 height 12.40, contents 185.80 M. Cft.	.....	118.54
No rain gauge ...	.....	.....	.....
Monsoon 16.55" Rabi 14.70" 1.85"	On 19th October 1952 Gauge 26.00. Contents 102.53.	19th October 1952 to 24th October 1952 Average for 6 days.	126.91
No rain gauge ...	.....	.....	.....
Monsoon 11.22" Rabi Nil	On 4th October 1952 Gauge 1.90.	Nil ...	4.84
No rain gauge ...	In October 1952 16 feet height.	.....	16 feet height

has not been fixed and hence no gauge record is available,

Serial No.	Name of Tank.	Date when the level fell to outlet sill or the lowest level in case of carry-over and the date of this level.	Details of crops irrigated.	Kharif
				Area irrigated in acres and supply consumed in M.Cft.
1	2	10	11	12
	CENTRAL CIRCLE—contd.			
64	Wadshivane Tank	The tank was dry from 1st May 1952 to 9th June 1952 and 18th January 1953 to 30th April 1953.	Seasonal crops	
65	Hotgi Tank	On 22nd May 1952 2-27.	Do.	118 Acres 13-28 M.Cft.
66	Parowadi Tank	.....	Do.	449 Acres
67	Gherdi Tank	On 3rd June 1952 Gauge 8-60' Contents 9-44 M.Cft.	Do.	114 Acres 11-4 M.Cft.
68	Sangwi Tank	.....	Do.	110 Acres
69	Koregaon Tank	The tank was dry from 1st May 1952 to 23rd September 1952 and 16th November 1952 to 30th April 1953.	Do.	.....
70	Madanwadi Tank	.....	Do.	80 Acres

Rabi.	Hot weather.	Total area irrigated in acres and supply consumed in M.Cft.	Revenue assessed.	Working expenses.	Remarks.
Area irrigated in acres and supply consumed in M.Cft.	Area irrigated in acres and supply consumed in M.Cft.				
13	14	15	16	17	18
180 Acres ... 12.02 M.Cft.	.....	180 Acres ... 12.02 M.Cft.	Rs. 2,754 <u>1,367</u>	Rs. 2,369	
1,246 Acres ... 61.42 M.Cft.	209 Acres ... 16.42 M.Cft.	1,564 Acres ... 91.30 M.Cft.	3,279 <u>2,415</u>	2,501	
810 Acres ..	92 Acres ...	1,351 Acres ...	3,719 <u>2,185</u>	46,535	
302 Acres ... 69.30 M.Cft.	20 Acres ... 2.67 M.Cft.	940 Acres ... 83.41 M.Cft.	6,701 <u>6,185</u>	777	
758 Acres ..	.....	877 Acres ...	1,722 <u>1,358</u>	6,646	
2 Acres ...	.....	2 Acres ...	427 <u>7</u>	1,223	
593 Acres ...	.....	675 Acres ...	5,123	Not received from A. G.	

Serial No.	Name of Tank or Lake.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M. Cft. above outlet sill up to full level.
1	2	3	4	5
71	<p>DECCAN IRRIGATION CIRCLE.</p> <p>WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.</p> <p>Matoba Tank (Tail Tank of the Mutha Right Bank Canal).</p>	Replenished by Mutha Right Bank Canal.	20.0	184.0
72	Khadakwasla (Lake Fife) ...	106	34.0	3,091
73	Lake Whiting at Bhatghar ...	128	143.0	24,198

Rain fall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-woir overflow and the over flow in M. Cft.	Total replenishment received (columns 7+8).
6	7	8	9
16.43	Maximum height reached on 24th September 1952 184.0 M. Cft.	14 hours on 24th September 1952 and 25 hours on 7th October 1952. Net overflow 81.13 M. Cft.	M. Cft. 265.13
31.76 at dam site ...	On 5th September 1952 3.046 M.Cft.	24th July 1952 3 Hours. 5,380 M.Cft.	8,426
34.18 at dam site ...	On 29th August 1952 24,198 M.Cft.	5th August 1952 to 5th September 1952 7,888 M. Cft.	32,086

Serial No.	Name of Tank or Lake.	Date when the level fell to outlet sill or the lowest level in case of carry-over and the date of this level.	Crops irrigated and supply	
			Details of crops.	Hot Weather season.
1	2	10	11	12
	DECCAN IRRIGATION CIRCLE. WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.			Acres.
71	Matoba Tank (Tail Tank of the Mutha Right Bank Canal)	Lowest levels reached on 27th December 1953. Tank was dry between 28th December 1952 to 12th June 1953.	Perennials ... 8 Months ... Seasonals ... Totals ... M. Cft. ...	Nil Nil Nil Nil. Nil.
72	Khadakwasla (Lake Bife) ...	Lowest level of 11.65' reached on 22nd June 1952. Contents 870 M. Cft.	Perennials ... 8 Months ... Seasonals ... Totals ... M. Cft. ...	<i>Mutha</i> 2,254 68 689 3,313 1,052.64
73	Lake Whiting at Bhatghar ...	Lowest level of 54.401' reached on 22nd June 1952. Contents 1,230 M.Cft.	(1) <i>On Bhaghar Dam and</i> Perennials ... 8 Months ... Seasonals ... Totals ... M. Cft. ... Perennials ... 8 Months ... Seasonals ... Pre-and Post-seasonal waterings. Totals ... M. Cfts. at Canal Head. Perennials ... 8 Months ... Seasonal ... Pre-and Post-seasonal waterings. Totals ... M. Cft. ...	464 18 73 555 95.60 6,820 18 73 270 6,981 22,567 11,604 Nil Nil Nil 11,604 3,663.5

consumed.		Revenue assessed. Water rates only.	Working expenses.	Remarks.
Monsoon season.	Rabi season.			
13	14	15	16	17
Acres.	Acres.	Rs.	Rs.	
61	11	36,838	Included in that of the Mutha Canals.	
628	881			
263	720			
952	1,612			
92.0	156.58			
<i>Canals.</i>				
2,461	482	1,99,852	Includes Matoba Tank also.	
2,088	Nil	(Irrigation only).		
3,358	2,225			
7,907	2,707			
2,377.08	1,186.15			
<i>and in Vir Basin.</i>				
485	485	Included in that of the Nira Left Bank Canal.	30,082	
033	281			
1,159	3,957			
2,277	4,723			
229.42	213.02			
<i>Bank Canal.</i>				
8,044	7,700	14,51,902 Water-rates only.	4,22,820 Includes Shet- phal Tank at Serial No. 74 below.	
5,190	3,602			
11,195	44,662			
Nil	Nil			
24,420	56,054			
5,976	4,806.0			
<i>Bank Canal.</i>				
15,719	12,859	19,40,674 Water-rates only.	6,09,727	
4,223	404			
15,506	30,009			
Nil	Nil			
35,448	43,362			
7,882.7	6,742.7			

Serial No.	Name of Tank or Lake.	Catchment area in square miles.	Full supply gauge above outlet sill.	Capacity in M. Cft. above outlet sill up to full level.
1	2	3	4	5
DECCAN IRRIGATION CIRCLE— <i>contd.</i>				
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT— <i>contd.</i>				
74	Shetphal Tank (Tail Tank of Nira Left Bank Canal).	23	37.50	592.0
75	Lake Arthur Hill (Bhandardara Dam).	47	265.7	11,189
76	Lake Beale (Darana Dam) ...	156.0	65.0	7,763
77	Chankapur Tank ...	100.0	F. S. L. 92.0'	1,548 —123
			Lowest level 30.0' sill	1,425 available for irrigation.
78	Waghad Tank ...	29.0	43.0'	606
79	Bhatodi Tank ...	44	7.0'	37.6

Rainfall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M. Cft.	Total replenishment received (columns 7+8).
6	7	8	9
10·71 127·49 in catchment of the lake. 80·92 35·92' at Chankepur. 70·19 11·2	9th October 1952 Height 37·50'.	No overflow ...	M. Cft. 592·0
	26th July 1952 Height 265·7'.	From 26th July 1952 to 7th September 1952. 8,767 M. Cft.	19,956
	25th July 1952 Height 65·0'	From 21st July 1952 to 22nd August 1952. 32,707 M. Cft.	40,574
	24th July 1952 Height 91·50'	From 22nd July 1952 to 17th September 1953. 868·23 M. Cft.	7,745
	25th July 1952 Height 48', Contents 603 M. Cft.	23rd July 1952 to 22nd August 1952 overflow. 7,747 M. Cft.	8,350
	Filled on 22nd June 1952. 37·6 M. Cft.	No appreciable overflow	27·6 M. Cft.

Serial No.	Name of Tank or Lake.	Date when the level fell to outlet sill or the lowest level in case of carry-over and date of this level.	Crops irrigated and supply	
			Details of crops.	Hot Weather season.
1	2	10	11	12
74	Shetphal Tank (Tail Tank of Nira Left Bank Canal).	Lowest level of 13' 0" reached on 27th June 1952.	Perennials ...	Acres. 274
			8 Months ...	Nil
			Seasonals ...	92
		Contents 60.0 M. Cft.	Totals ...	366
			M. Cft. ...	125.60
75	Lake Arthur Hill (Bhandardara Dam).	Lowest level of 150' 60" reached on 21st June 1952.	Perennials ...	<i>Pravara</i> 15,787
			8 Months ...	11
			Seasonals ...	926
		Contents 950 M. Cft.	Totals ...	16,724
			M. Cft. ...	5,201
76	Lake Beale (Darana Dam) ...	Lowest level reached on 8th June 1952.	Perennials ...	<i>Godavari</i> 12,782
			8 Months ...	31
			Seasonals ...	8
		Contents 605 M. Cft.	Totals ...	12,821
			M. Cft. ...	2,306
77	Chankapur Tank ...	Lowest level reached on 8th June 1952.	Perennials ...	<i>Girna</i> 1,558
			8 Months ...	Nil
			Seasonals ...	19
		Contents 15.0 M. Cft.	Total ...	1,577
			M. Cft. ...	363
78	Waghad Tank ...	Lowest level reached on 12th June 1952.	Perennials ...	<i>Paikhed, Ozar-Tam</i> 604
			8 Months ...	Nil
			Seasonals ...	Nil
		Contents 55 M. Cft.	Totals ...	604
			M. Cft. ...	181
79	Bhatodi Tank ...	Lowest level on 18th November.	Perennials ...	Nil
			8 Months ...	Nil
		Contents Nil.	Seasonals ...	Nil
			Totals ...	Nil
			M. Cft. ...	Nil

consumed.		Revenue assessed. Water-rates only.	Working expenses.	Remarks.
Monsoon season.	Rabi season.			
13	14	15	16	17
Acres 307 284 1,420	Acres 279 284 3,075	47,888 Water-rates only.	Included in those of the Nira Left Bank Canal as it is a part of that Canal.	
2,020	3,638			
270-07	292-0			
<i>Canals.</i> 18,115 1,909 9,851	18,805 923 28,770	25,11,485 Water-rates only.	4,55,487	
29,875	46,693			
6,834	5,899			
<i>Canals.</i> 15,182 643 5,267	14,298 442 14,837	15,33,735 Water-rates only.	4,74,434	
21,092	29,577			
3,453	2,455			
<i>Janal.</i> 2,174 604 4,871	2,380 604 3,569	3,22,060 Water-rates only.	1,09,469	
7,049	6,553			
970	849			
<i>but and Wadal</i> 623 1,560 253	<i>Canals.</i> 664 1,560 1,250	1,16,427 Water-rates only.	87,169	
2,436	3,474			
281	297			
Nil Nil 101	Nil Nil 308	2,337 Water-rates only.	5,410	
101	308			
5	15-4			

Serial No.	Name of Tank or Lake.	Catchment area in square miles.	Full supply gauge above outlet still.	Capacity in M. Cft. above outlet sill up to full level.
1	2	3	4	5
DECCAN IRRIGATION CIRCLE—concl'd.				
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT—concl'd.				
80	Parsul Tank	17.33	F. S. L. 35.0 with silt 20.0 12.0 approx- imately.	118.70 20.0 silt. 98.70 net.
WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.				
81	Rakh Tank	5.36	23.0'	34.22 -2.05 32.17 Available capacity.
82	Khamgaon Tank ... ..	..... Partly replenished by Mutha Right Bank Canal.	22.0'	38.10
83	Visapur Tank	159	30.0'	1,430 Useful contents against 1,510 M. Cft. net contents.
84	Limjiwadi Tank	7.8	24.0'	46.04
85	Khirdi-Sathe Tank	7.05	20.0	91.05

Rainfall in inches during Monsoon Rabi and during the year.	Date when the tank was filled and if not filled, when and what maximum level was reached.	Periods of waste-weir overflow and the overflow in M. Cft.	Total replenishment received (columns 7+8).
6	7	8	9
7.45	Did not fill completely. On 12th August 1952 it filled to the height of 30' 60", the contents being 91.30 M. Cft.	No overflow	M. Cft. 91.30 20.0 71.30
2.31"	Tank did not fill, maximum level of 13.30' reached on 11th June 1952; contents 12.70 M. Cft.	Do.	12.70
8.87"	Filed on 21st August 1952...	Do.	38.10
14.37"	The tank did not fill, maximum level of 20.80' reached on 11th June 1952; contents 143 M. Cft.	Do.	192.0
7.10"	The tank did not fill, maximum level of 18.7' reached on 2nd October 1952; contents 26.59 M. Cft.	Do.	26.59
9.25"	The tank did not fill to F. S. L., maximum height reached on 27th September 1952.	Do.	Cannot be given.

Serial No.	Name of Tank or Lake.	Date when the level fell to outlet sill or the lowest level in case of carry-over and date of this level.	Crops irrigated and s	
			Details of crops.	Hot Weather season.
1	2	10	11	12
80	DECCAN IRRIGATION CIRCLE— <i>concd.</i>			Acres.
	WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT— <i>concd.</i>			
	Parsul Tank	The tank became dry on 20th November 1952	Perennials ... 8 Months ... Seasonals ...	32 ... 19
			Totals	51
			M. Cft.	On percolat water River.
81	WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.			
	Rakh Tank	On 19th December 1952, no contents were let unused.	Perennials ... 8 Months ... Seasonals ...	Nil Nil Nil
			Totals	Nil
			M. Cft.	Nil.
82	Khamgaon Tank	The tank went dry on 4th January 1953.	Perennials ... 8 Months ... Seasonals ...	Nil Nil Nil
			Totals	Nil
			M. Cft.	Nil
83	Visapur Tank	On 16th January 1952, contents above lowest outlet sill equal to 9'00.	Perennials ... 8 Months ... Seasonals ...	403 2 15
			Total	420
			M. Cft.	132
84	Limjiwadi Tank	On 4th April 1953 contents Nil.	Perennials ... 8 Months ... Seasonals ...	Nil Nil Nil
			Totals	Nil
			M. Cft.	Nil
85	Khirdi-Sathe Tank	On 25th October 1952, the contents were Nil.	Perennials ... 8 Months ... Seasonals ...	144 Nil Nil
			Totals	144
		Note.—M. Cft. consumed cannot be		given as there is

sumed.		Revenue assessed. Water-rates only.	Working expenses.	Remarks.
Monsoon season.	Rabi season.			
13	14	15	16	17
Acres.	Acres.	Rs.	Rs.	
97 74 918	97 74 102	6,344 Wago-rates only.	2,046	
1,080	273			
61.41	4.24			
Nil 6 43	Nil Nil 38	558	2,348	
40	38			
4.67	2.66			
Nil Nil Nil	Nil Nil 701	6,021	1,321	
Nil	701			
Nil	36.74			
Nil 18 335	Nil Nil 293	19,497	11,961	
353	293			
13.0	15.0			
Nil Nil 89	Nil Nil 400	2,916	Not known.	
89	400			
3.0	10.0			
144 Nil 16	66 Nil Nil	5,256	1,573 (M. & B. cost).	
100	66			

measuring device to measure the discharge.