

(1) Number of Pages.....14
(2) Date of repair.....24.2.1969
(3) Initials of the Referencer.....*[Signature]*

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

REVENUE DEPARTMENT

G.O. No. 548
B.P. No.

Press
Mis.

Dated 25-4-1876 196 .

Not to be folded or roughly handled

548
1

*Proceedings of the Madras Government, Revenue Department,
25th April 1876.*

No. 186. Read the following Proceedings of the Board of Revenue, dated 12th April 1876, No. 1,018:—

Read the following letter from R. W. BARLOW, Esq., Collector of the Chingleput District, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Saidapet, 12th April 1876, No. 216:—

IN forwarding G. O., (to be returned), Revenue Department, No. 844, dated 8th instant, passed on G. O., Financial Department, No. 620, 4th instant, I have the honor to report, for the approval of the Board, with reference to paragraph 2, that I have issued orders prohibiting any fresh cultivation of second crop, and restricting irrigation to lands on which crops are already standing. The Tahsildar proceeds to the Red Hills to-morrow, and I shall be there myself in a few days for the settlement, so that every care will be taken that the minimum quantity of water only, necessary to bring these standing crops to maturity, is issued.

2. As regards paragraph 1, I will submit statements of actual cultivation both first and second crop shortly. The Superintending Engineer has reported that there is no "wasteful irrigation," and I do not anticipate that the ryots have taken more water than they would have done in an ordinary good year. Looking, however, at the empty tanks and at the enormous amount of nunjah waste and shavi throughout the taluq, I am of opinion that the cultivators have had *more* than "their usual supply" of water this year, *i.e.*, that they have drawn more water than would have been available in an exceptionally bad season like this, but for the recent enlargement to the lake, in view to the Madras Water Works Project.

SUBMITTED to Government with reference to G. O., dated 8th April 1876, No. 844.

(A true Copy and Extract.)

(Signed) C. A. GALTON,
Acting Secretary.

No. 187. ORDER THEREON, 25th April 1876, No. 548.

Irrigation No. 5.

COMMUNICATED to the Financial and
the Public Works Departments.

(True Extract.)

(Signed) D. F. CARMICHAEL,
Secretary to Government.

To the Financial Department.
„ the Public Works Department.
„ the Board of Revenue.

Exd. A. Grubert.

Municipal—Water Supply.

Read the following papers:—

No. 22. From L. R. BURROWS, Esq., Acting President of the Municipal Commission, Madras, to the Hon. W. HUDLESTON, Chief Secretary to Government, Fort St. George, dated Madras, 11th March 1876, No. 460—1602.

I have the honor to forward, for the information of His Grace the Governor in Council, copy of a letter which I have received from the Executive Engineer, No. 2 or Mount Range, on the prospect of the supply of Red Hills water to the Municipality during the coming dry season.

2. The average daily consumption of the Municipality as shown by our returns is 34,088 cubic yards or 5,752,350 gallons. It will be necessary to raise this quantity by pumping unless we have rain. As we cannot count upon rain, it is only common prudence to make preparations for pumping, so as to be ensured in any case against the fearful calamity which a total failure of the Red Hills water supply would now be to this city.

From Captain A. C. SMITH, R.E., Executive Engineer, No. 2 or Mount Range, Chingleput District, to L. R. BURROWS, Esq., Acting President, of the Municipal Commission, Madras, dated Chembrambakum, 21st February 1876, No. 3168.

In reply to your letter, No. 404—1480, of the 31st ultimo, I have the honor to inform you that there is not sufficient water stored in the Cholaveram Tank to supply the irrigation thereunder.

2. Taking a period from 1st February to 22nd July, during which in 1875 there was next to no rain and consequently little or no disturbance therefrom in the tank levels, I find the following facts:—

I. Cholaveram Tank—

February 1st, level 60.95, contained 26 mls.
July 22nd „ 52.26, „ 10 „
Fall in tank in 172 days 8.69 feet or 16 mls., total loss 7.55 issued to irrigation.
Or in one day 606 inches, 8.45 loss by evaporation, &c.
Against this we had on 7th February 1876 with tank at 47.42 only millions stored.

II. Red Hills Tank—

February 1st, level 41.91, contents 71.0 mls.
July 22nd, „ 34.67, „ 32.5 „
Fall in tank in 172 days 7.24 feet or 38.5 „
Or in one day .55 inches, 15.75 issues, irrigation 11.75, Municipal 4.00.
Loss 22.75 evaporation, &c.

Against this we had for this year on the 1st February

Tank at 40.18 contained	61.5 mls.
Deduct loss and issues in 1875	38.5 „
Then on July 22nd tank would be	32.0 and contain balance 23.0 „

3. So that by the 22nd July unless we have rain there will only be 1.7 feet above the floor or sill of the lowest pipe in the sluice, and as the fall due to irrigation, &c., plus evaporation, is in July about 75 inches per day, by the end of that month there will be only one foot on the sill.

4. This is assuming that the loss or total fall during the period is equal to that in 1875, but as the monsoon season has been so much drier this year the probabilities are that the total losses will be much greater.

5. I have forwarded a copy of this letter for the information of the Superintending Engineer.

2/16/76

2/16/76 230.5.6/76
2437: 30-10-76

Obdt. of 1876 31.10.76.

To

REVENUE.

THE FINANCIAL DEPARTMENT.

&c., &c., &c.

Dated April, 25th.

Recd.

Recd.

G.O., 25th April 1876, No. 648.

APRIL.
Nos. 186-187.

Hydration to lands watered by the Red Hills Tank.
—Communicating to the Financial and the Public Works Departments Proceedings of the Board of Revenue reporting that orders have been issued prohibiting fresh cultivation of 2nd crop and restricting—

*Proceedings of the Madras Government, Financial Department,
4th April 1876.*

No. 20-M.

MEMORANDUM.

No. 23.

There is unquestionably a possibility that, towards the end of July or even sooner, the water in the Red Hills Tank will be so low that the town of Madras will have to be supplied by pumping.

2. Since the endorsement of the Chief Secretary on the letter of the President of the Municipal Commission has been received in this department, the undersigned has communicated with the Superintending Engineer of the Chingleput District, the General Superintendent, Public Works Stores, the Consulting Engineer for Railways, and Messrs. Nicoll and Co. of Bombay. He has also inspected the Red Hills Tank.

3. The Superintending Engineer reports that there is no leakage of importance from the tank and no wasteful irrigation, and that the rapid disappearance of the water to an extent unaccounted for by measured discharge is due to evaporation.

The Consulting Engineer has not replied, but it has been ascertained that there is only one pump belonging to the South Indian Railway which may possibly be made available.

The General Superintendent of Stores has forwarded a report which shows that there are two engines of sufficient power which might be used, one of which is a stationary engine and is, at present, at Guindy, and that two 12-inch pumps would be required. As more readily procurable, he recommends that two 8-inch and two 7-inch pumps be obtained from Messrs. Nicoll of Bombay. Messrs. Nicoll were asked what they could supply, but their reply is not definite, and they have been again communicated with.

4. The undersigned is not prepared to endorse the statement of the Superintending Engineer of the Chingleput District that the disappearance of the water, unaccounted for by discharge through the sluices, is due solely or even chiefly to evaporation. The information available regarding loss in other reservoirs would lead to the conclusion that during the period of 172 days, referred to by Captain Smith, the loss from evaporation and absorption should not exceed ten million cubic yards, and that the actual waste (reported to be in that period of time twenty-two million cubic yards) is altogether abnormal.

5. This subject requires and will receive further attention, but it is not apparent that anything can be done which will be of immediate effect in reducing the rate of fall of the water surface of the reservoir from leakage.

It is different as respects water used for irrigation.

The cultivators are busily engaged in flooding and breaking up their land preparatory to sowing a second crop, and a large quantity of water is being drawn daily from the tank for this purpose. In view of the scarcity of water, measures should, it is thought, be at once taken to limit cultivation. The ryots have already drawn off for their main crop far more than would have been available had the tank not been enlarged, and they have no claim whatever to any of the present supply.

6. It is to be remarked that there are usually freshes in the Cortilliar river at the end of July or during August, and that there is every reason to hope for a

*Proceedings of the Madras Government, Financial Department,
4th April 1876.*

by no means insignificant supply during one of these months. This is of course no argument against the adoption of precautionary measures now.

7. Regarding the temporary arrangements to be made, it does not seem that the Railway Companies' Stores can be relied on to supply the machinery required, and pumps must be purchased either in England or Bombay.

8. Considering the uncertainty which there is as to the time for which pumping will be necessary, the possible variation in the lift and degree of proximity of the water to the Municipal inlet, it is considered that portable engines should be used, two 10 or 12 H.P. engines should be ordered from Messrs. Nicoll and Co. if they have them in stock, and also the four pumps referred to by the Superintendent of Stores, viz., two 7 inch and two 8 inch. The 10-H.P. engine now on the beach near the Fort should be sent to the Red Hills and held in reserve.

9. It would be more satisfactory no doubt to order two 12-inch or 15-inch pumps with suitable portable engines directly from Messrs. Gwynne and Co.; but there is the risk of delay or accident on the journey from England, and the arrangements for this year must in any case be of a makeshift character.

10. When the water in the tank has fallen to the level of the lowest outlet, it will have receded to a considerable distance from the sluice. It will be necessary to erect a staging in the bed of the tank, and probably a number of trestles and some length of iron piping will be required to lead the water which may be pumped into the channel now dug to the sluice. It will be well to decide on the details of the arrangements and commence at once the transport to the spot of the necessary material.

11. The question of erecting permanently at the Red Hills an engine and pumps for use in raising water is apart from this. It will have to be considered whether the cost of procuring and placing two stationary engines with all the arrangements for economising fuel, and with the necessary buildings together with the cost of upkeep and pumping, would be repaid by the utilization of the low level water of the reservoir for second-crop irrigation, and by the advantage of being ready to meet an emergency like the present one. A rough estimate for pumps and portable engines is attached.

FORT ST. GEORGE, (Signed) A. DEC. SCOTT, Major, R.E.,
29th March 1876. Deputy Chief Engineer for Irrigation,
for Chief Engineer for Irrigation.

To the Chief Secretary to Government, Fort St. George.

From Colonel F. J. MOBERLY, R.E., Superintending Engineer, Chingleput, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Mount, 21st March 1876, No. 4987.

In reply to your memorandum, No. 8, C.N., of the 18th instant, I have the honor to observe that the leakage from the Red Hills Tank is very small, and that it does not entail waste of water, as the fall from the tank is so great that even the surplus channel can irrigate very largely.

2. This is dammed up a little distance below the bridge by which the northern road crosses it, and in several places below, if the first of these dams did not exist almost perpetually, the northern sluice would be useless.

3. There are no channels to speak of, and certainly no breaches, and there is no need for any intervention by either Revenue or Public Works Department.

*Proceedings of the Madras Government, Financial Department,
4th April 1876.*

4. The great deficiency is due to the want of rain, and the consequent dryness of the atmosphere, entailing a larger evaporation than usual—an evaporation which has been shown by Captain A. C. Smith to be most startling.

5. I would urge as I have done more than once before the immediate preparation of means of pumping, which, unless we have some very extraordinary fall of rain, will, in my opinion, be required before many weeks pass.

6. I cannot but think that the cost of such arrangements would be speedily recovered by the larger amount of second-crop cultivation which we are obliged to discourage now, while compelled to retain idle twenty and half millions cubic yards of water.

From J. N. GRAINGER, Esq., General Superintendent of the Public Works Workshops and Stores, to the Assistant Chief Engineer for Irrigation, Fort St. George, dated Chepauk, 23rd March 1876, No. 5145.

In reply to your memorandum of the 22nd instant, relative to the pumping of water at the Red Hills, I have the honor to state that to raise 4,200 gallons per minute a height of twelve feet using Gwynne's centrifugal pumps will require an engine working up to 20 H.P. for twenty-four hours per diem.

Of the machinery available in the stores of the Storekeeper of Machinery there is one 15-H.P. vertical engine and boiler belonging to the Gun Carriage Factory that would do the above work.

The boiler of this engine requires repair, and steam pipes are wanted. The cost of the repairs, transporting to Red Hills, and fixing engine and boiler, would be about Rupees 1,000 exclusive of engine and boiler-house and chimney.

Supposing the engine and boiler-house chimney and foundation of engine and boiler ready, it would take about three weeks to set up the engine and boiler ready for working.

As a temporary measure, I would recommend that the 10-H.P. engine and boiler, lately used for pumping sea water into the Fort Ditch, and the 10-H.P. engine and boiler at Government House, Guindy (this engine and boiler will not be in use after His Grace the Governor leaves Madras for Ootacamund until about October next), be both taken to the Red Hills for working the pumps required which should be two 12-inch centrifugal pumps, but as these pumps would have to be obtained from England whilst Messrs. Nicoll and Co., Bombay, have in stock two 8-inch and two 7-inch pumps, I think it would be best to purchase these four pumps for the work. Each engine would work one 7-inch and one 8-inch pump.

	RS.
To cost of two 8-inch pumps delivered in Madras	2,100
" " of two 7-inch "	1,700
" erection, &c., charges	3,000
Total	6,800

The whole could be got into working order in about one month.

Should either or both of these engines be considered not available for the work then 10-H.P. engines and boilers should be purchased from Messrs. Nicoll and Co. at a cost of about Rupees 5,000 each delivered in Madras.

Telegram received from Messrs. Nicoll and Co., Bombay.

"Can supply one 7 and one 8 inch centrifugal pump at once no engines stock one of each size six weeks."

If Government have to provide funds for the pumping machinery, &c, then the two pumps as above may be purchased, but we cannot give an order to Nicoll and Co. to obtain the engines and other two pumps from England.

*Proceedings of the Madras Government, Financial Department,
4th April 1876.*

If the Municipality have to pay all expenses an order may be given by them to Nicoll and Co. or else order direct from England. It would be

two 12-inch pumps either cases.

J. N. G.

State of probable Cost of procuring two 12-H.P. Portable Engines, two 8-inch and two 7-inch Centrifugal Pumps, and erecting the necessary fixtures at the Red Hills.

	RS.
Two 8-inch C. pumps delivered in Madras	2,100
Two 7-inch do. do. do.	1,700
12-H.P. Portable Engines Ductile Cylinders	8,900
Stiles, staging, iron piping, excavation at Red Hills, carriage	3,000
Total	15,700
Say	16,000

A. DEC. S.

ORDER THEREON, 4th April 1876, No. 620.

Memorandum of the Chief Engineer for Irrigation will be communicated to the President of the Madras Municipal Commission, and the serious attention of the Secretary of Revenue will be requested in the Revenue Department to paragraph 1 of the memorandum.

(True Extract.)

W. H. Johnston
Chief Secretary.

President of the Municipal Commission, Madras.
Revenue Department.
Public Works Department.

2744/16 1876

N^o 844

7/10/76

The collector will report through the collector whether his lands under his Red Hills claim have had his usual supply of water & whether the quantity now drawn is in excess of it. - he has to take immediate steps to limit cultivation & prevent further use of his water for irrigation purposes.

12 1/2

19th April 1876
20th April 1876

Obt of 1876

FINANCIAL

THE PRESIDENT OF THE MUNICIPAL COMMISSION.

APRIL.

NO. 22-24.

6. O. 4th April 1876, No. 620.

Municipal - Water Supply. - The Chief Engineer's Memorandum regarding the present state of the water supply at the Red Hills Park, communicated to the President, Messrs. Municipality, and the Revenue Board's attention to be called to paragraph 5 of the Memorandum with reference to limiting the supply of water for cultivation.

28th April 1876

with

M. Graham

Revenue Department

12 1/2

Proceedings of the Board of Revenue
Dated 12th April 1876

Read the following

N^o 216

From R. W. Barlow Esquire
Collector of the Bangalore District
S. L. A. Galtou Esquire
Secretary to the Board of Revenue
No. 216

Sr.

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No. 844 dated 8th instant passed on
G. O. S. D. No. 620, 4th instant, I
have the honor to report for
the approval of the Board, with
reference to para 2 that I have
issued orders prohibiting any
fresh cultivation of 2nd crop, and
restricting irrigation to lands
on

on which crops are already standing
The Tahsildar proceeds to
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I shall be there myself in a few
days for the settlement, so that
every care will be taken that
the minimum quantity of water
only necessary to bring these standing
crops to maturity - is issued.

2 As regards para 1 I will
submit statements of actual
cultivation both 1st & 2nd crop shortly
The Superintending Engineer
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wasteful irrigation and I do not
anticipate that the ryots have
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have

548/6
have done in an ordinary good
year. Looking, however, at the
empty tanks, and at the enormous
amount of Kungah waste and
shavi throughout the Lake, I
am of opinion that the cultivators
have had more than "their usual
supply" of water this year that
they have drawn more water than
would have been available in an
exceptionally bad season like
this, but for the recent enlargements
to the Lake, in view to the Madras
Water Works project.

Chengalpet District } Shavey
Collector's office } (22) R. W. Parlow
Saidpet 12. April 76 } Collector

Submitted to Govt
with

with reference to G. O. dated
8th April 1876 at No 244.

(True copy & extract)

W. C. C. C.
Acting Secretary

To
The Secretary to Government
Public Department

W. C. C. C.
G. R.

Communicated to the Financial
to the Public Works Department.

to the Financial Dept. on 5 May
21 the 3rd Sept 5
14 the Boarding Dept

25 June 1876

108 April 1760 1876

Nov: 1876-247
N. 1560

28/14
Proceedings of the
Board of Directors
dated 12th July 176
Recd 12-...
Recd 19-...
Recd 22-...

1876-247-247

21-11-72
Letter from the City of New York
stating that order have been issued
prohibiting free circulation
of 20 copies of the New York
Times and other papers
which are prohibited