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# MADRAS RECORD OFFICE.

## Government of Madras.

Financial DEPARTMENT.

G.O. No. 876 Press / Mis.

1998-199 1998-199

Dated 21-5- 18 [illegible]

[illegible]

**Not to be folded or roughly handled**

No. 198. Read the following letter from Captain R. F. TAYLOR, Executive Engineer, in charge Kurnool, to Colonel G. W. WALKER, R.E., Chief Engineer and Secretary to Government, Public Works Department, dated Kurnool, 29th April 1874, No. 10 :—

With reference to the Order of Government, No. 39, dated the 9th of August last, I have the following remarks to make on the state of the water supplied from the irrigation canal to the town of Kurnool.

Up to the present time there has been no one whom I could detach to prepare the sections necessary to enable me to report fully on the question submitted for investigation ; but I have ascertained that the fall in the channel from the point where it leaves the canal to sundry parts of the town is from eight to fourteen feet, in a distance of about one to two miles. Should it be considered necessary I shall have the requisite levels taken so soon as I can and send in a complete report ; in the meantime I have thought that it would best meet the wishes of the Government if I gave, without further delay, the results of my own personal observations.

2. I believe that Mr. Anderson's remarks were not intended to apply solely to the semi-covered channel which conveys the water to the thickly-populated part of the town but also to the several open irrigation channels which supply the irrigated fields close to the town and which I am aware are used by the people, where found convenient, for drinking and other purposes. These open channels are impregnated with both animal and vegetable matter in a decaying state. The main channel from the canal is open for a short distance ; thence to, and throughout, the town it is a closed masonry conduit with open cisterns at irregular intervals, where the people draw water. These cisterns are comparatively small, rarely more than six or seven feet, across whether they are square or circular. They are surrounded by stone curbs and, in some cases, walls which are not so high as to prevent people getting down into the water except within the town, where the channel is mostly too deep below the surface to permit of people descending to it. I believe that most of the cisterns are on the main or branch channels, and in these cases the water flows right through, the surplus passing into the rivers ; but in some cases cisterns are supplied by lateral channels, and in some of these the water remains stagnant, and I have heard it complained of as being, to a slight extent, offensive.

3. I do not think that much animal or vegetable matter gets into the channel after it leaves the canal, as they could get in only at the cisterns, except where, in the town, the sewage and water-channels run close together ; and, as the former is always at the higher level and neither of them carefully made, it is probable that sewage percolates into the water here and there. There is, however, on the main and branch channels a constant and rapid flow of water which would have the effect of counteracting this evil to some extent, that is, the sewage would be greatly diluted. These remarks do not apply to private cisterns, which will be noticed hereafter.

4. The water runs nearly a mile before the channel enters the fort or town proper : on this portion there are, I believe, five or six open cisterns two of them being on a branch channel. In four of these cisterns, I have frequently seen men and women washing themselves and their clothes. One of the cisterns is just at the rear of the District Office and opposite and near to the Police lines. This was a

favourite place for the Police to wash their clothes and themselves in until I put a stop to it. A few mornings since I saw a man and two women washing themselves in a cistern near the People's Park, and three or four days ago I saw a woman standing in the cistern near this office with her cloth tucked up and washing herself from her hips down in the running water. I have reason to believe that during my absence this cistern is fouled * as it used to be.

* This is a fact I saw one Policeman cleaning his teeth and spitting into the running water and two women washing a certain part of their body.

On the morning of the 18th instant I walked through the town to see the state of the cisterns. They were all tolerably clean: at one or two water had lodged around the curb and was putrid and stinking, in one or two branches of trees were lying, and in one case human excreta were lying upon the stone curb.

Besides the cisterns alluded to above there are others which I did not see as they are within private houses. There are some ten or twelve of these private cisterns, and the number is increasing. They belong principally to the Komati merchants and are supplied by lateral channels, which vary from twenty or thirty to an hundred feet in length. There are no outlets from them; they are altogether under the control of the householders, and, so far as they are concerned, there is no municipal supervision whatever. On making inquiry about them I was told that they were never inspected; that the Municipal officers never go near them unless when "a very bad stink" is found to come from the houses. As it must be a very bad stink indeed that will titillate the nose of a native Municipal officer I am disposed to believe, what is more than generally suspected, that these private cisterns are used for all purposes of cleansing and that they are greatly polluted. They are directly connected with, and are on the same level as, the main channel, so that if they are polluted it must be polluted too.

I would recommend either the abolition of these cisterns or the adoption of such an arrangement as would prevent the possibility of any water going back to the main channel.

5. But, apart from the fouling caused by so many open public and private cisterns, the water is otherwise so dirty as to be unfit for use by human beings. It is so dirty now, and has been so dirty since the rains set in, that I do not allow it to be given to my horses. Sunkesala, where the irrigation canal is taken off the Tungabudra, is about sixteen miles from Kurnool. During the dry season the water is tolerably clean, but is never clear. After one or two heavy showers it becomes very like thick pea-soup, in which condition it enters the canal where it receives in its sixteen miles run to Kurnool an accession of black cotton soil from the drainage of the upper country and in this state it is distributed to the people. Those who are particular about what they drink endeavour to purify the water by the use of ground dhal and salt. They first mix the dhal with the water and then the salt, and in a few hours the greater part of the solid mater is thrown down. The cost of this purification is about 1 Pie for every five or six ordinary chatties of water.

Water for drinking only is thus treated; for all other purposes it is used as it comes from the cisterns. There is a cheaper mode of clearing water by the use



of the seed of the Chilla Ginza (the *Strychnos potatorum*, Brown); but, as this seed is supposed to supply the germ of the guinea-worm to water, the process is practised only by the poor. Under these circumstances, it is to be feared that the poorer classes make no attempt to clean the water but drink it as it is. Many prefer to take water direct from the Tungabudra to using that which is supplied from the canal, and I think they are right.

6. One way of remedying these evils would be to filter the water where it leaves the canal, to distribute it through iron or other close pipes, and to have settling reservoirs, say three in number and covered to prevent all possibility of pollution. The line which seems to me most favourable would lead off from the canal somewhere near its junction with the Gooty road. The soil here is gravel, and the settling beds and reservoirs would be in cutting—a circumstance which in some respects would be advantageous. The water should be allowed to settle for twenty-four hours in each tank, and from experiments carried out here by Mr. Fraser and myself I am in a position to state positively that on the third day the water would be free of almost all impurity. It parts with the bulk of the solid matter held in suspension in the first day (this, from careful measurement and gauging, amount to eight per cent. of the entire volume); about one per cent. is deposited on the second day and some inappreciably small percentage on the third. The water has an excellent flavour, and, in passing it through a bed of sand, charcoal, lime, and gravel it would be further freed of all organic or animal impurities. On leaving the reservoir the water should be conveyed in pipes through the centre of the road to Budawarpett, where perhaps the first fountain should be put up to supply the villagers and the Collector's cutcherry. From Budawarpett the mains should be carried over the Hindry Bridge, and on reaching Adoni gate I would place a second fountain; following the line of road I would place the third at or near the Police Hospital for the benefit of the two offices located there, and from thence, passing by the jail, I would terminate somewhere near the dispensary, at which spot as also at the jail I would erect suitable structures for the convenience of the public. So far as I can judge no pumping would be required; the head of water, some four or five feet, would only just be sufficient to let the fluid rise and bubble over.* The scheme could be matured and proper estimates, &c., submitted, if the Government deem it necessary, for the health and well-being of the people.

Completed by Captain Taylor.

* I am assuming, of course, that there are upright pipes attached to the drains or some simple contrivance of the sort.

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Transferred to the Financial Department with reference to the Orders in that department, dated 23rd July 1873, No. 1051.

11*th May* 1874. (Signed) G. W. WALKER, Colonel, R.E.,
*Secretary to Government, P.W.D.*

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No. 199. ORDER THEREON, 21st May 1874, No. 876.

Communicated to the President of the Kurnool Municipality.

*Proceedings of the Madras Government, Financial Department,*
21*st May* 1874.

2. No time should be lost in putting a stop to the fouling of the water within the town in the manner reported by the District Engineer and purifying the supply generally.

(True Extract.)

*Acting Chief Secretary.*

To the President of the Municipal Commission, Kurnool.
,, Public Works Department.

Exd. A. S. Rodgers.

From, The District Engineer,
Kurnool

To, The Chief Engineer,
Madras.

Sir, With reference to the order of the Government No. 39 dated the 9th of August last, I have the following remarks to make on the state of the water supplied from the Kurnool Irrigation Canal to the Town of Kurnool.

# Govt. of {1874} Madras.

## FINANCIAL.

To

THE PRESIDENT OF THE
MUNICIPAL COMMISSION,
*Kurnool,*
&c., &c., &c.

*Dated May, 21st.*

*Recd.* 22nd.

*G. O., 21st May 1874, No. 876.*

## MAY.
## Nos. 198-199.

*Water Supply to Town of Kurnool.*—The District Engineer's report on the state of the water supplied from the irrigation canal to the town of Kurnool, communicated to the President of the Kurnool Municipality with instructions that no time should be lost in putting a stop to the fouling of the water within the town in the manner reported by the District Engineer and purifying the supply generally.

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the Rivers; but in some cases Cisterns are supplied by lateral Channels, and in some of these the water remains stagnant, and I have heard it Complained of as being, to a slight extent, offensive.

3. I do not think that much Animal or Vegetable matter gets into the Channel after it leaves the Canal, as they could get in only at the Cisterns; except where, in the Town, the Sewage and water Channels run close together; and as the former is always at the highest



level and neither of them carefully made, it is probable that Sewage percolates into the water here and there; There is however, on the main and branch Channels, a constant and rapid flow of water which would have the effect of counteracting this evil to some extent, that is the Sewage would be greatly diluted: These remarks do not apply to private cisterns which will be noticed hereafter.

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Water for drinking

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Completed by Captain Taylor

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125

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and on reaching Odonigate
I would place a second
fountain, following the
line of road. I would
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the police Hospital for
the benefit of the two





offices located there and
from thence passing by
the Jail. I would termi-
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Estimates &c. submitted
if the Government deem

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it necessary for the health and well being of the people.

I have the honor to be,

Sir,

Your Most Obdt. Svt.

P. F. Farquhar Captain

Exce. Engr. In Charge

Respectfully forwarded to the Financial Department with reference to the matter of the estimate dated 22d April 1873. Lt. Col. Q.M.G.

Chief Engineer Dept. of the South

Washington D.C.

11th April 1873

Compd. G.E.

P.W. 1873. No. 2768.

Respectfully returned to the Chief Engineer Dept. of the South

Chief Quartermaster's Office

Dated 29th April 1873

Rec'd 1st May

Respectfully returned to the Chief Engineer Dept. of the South

and recommended certain deductions to be made if it should be considered proper

Comptroller

Thos. P. McC. Kinnard
Fin. Depart.

Kirwee 876 4 1873 DEPARTMENT.

From

Mr District Engineer
Kumara
thro' the P. W. Depr.

No. 10

Dated 29 April
Recd. 12 May } 1873.

No. 1030

S. C.

E.

Reports on the
State of water supplied
to Kumara Town &
recommends certain
schemes to supply it
with unpolluted water

With ref.

Blackwood 21 May 1873 & 1876

Communicates the Resolution of the
Kumara Municipality.

Requests to be informed as to
Putting a stop to the present
to keep in the Culverts
Engineer.

C15/A21/5

Govt. of {1874} Madras.

Financial

To
The Presdt. Irrign. Commrs.
Kurnool.
&c

G.O. May. 21. , 1874, No. 876.

Nos. 198-199.

Water Supply to town of Kurnool.

Rec. Dt. Engrs. report on the state of the water Supplies from the Irrigation Canal to the town of Kurnool Comr. to the Presdt. of the Kurnool Irrign. with instructions that at time shd. be taken in putting a stop to the fouling of the water within the town in a manner reported by the Dt. Engr. & purifying the [illegible]