Date taken out	For what purpose			Initials of clerk taking the paper or of attender	Date returned	Initials of attender
	Department.	C. No.	Year.			

[M. 2,000—4-5-97.]

INDEXED.

Local & Munl. (1897) Department.

MISCELLANEOUS.

G.O., No. 1235-M

DATED 19-5-97.

DESPATCHED

√

[Despatch Abstract.]

Water Supply

Recording correspondence relating to the present capacity of the Bugga Springs at Cuddapah, and drawing the attention of the Munl. Council to the Collector's remarks in his Endt.

Date taker

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

AMS.

Local & Munl. (1897) Department.

1935. Bn

CURRENT No. 2116/Rev of 97

Dis No :- 3238/Rev 99/97

SECRETARY TO GOVERNMENT
LOCAL & MUNICIPAL DEPARTMENT
11 MAY. 189

From The Chairman,
Municipal Council
Cuddapah

No. 539

Order

Forwarded.

2/. The work being an urgent one, cannot be postponed till it can be executed as a famine relief work. It is doubtful if people near Cuddapah town would now work for famine wages. In any case the work is a small one and skilled labour will be required except for the petty excavation. Cuddapah Town has not been hitherto considered an affected locality.

Geakhad Padaulu
For Collector.
9.5.97

P.R. 9.5.97.

Dated 28.4.97

Received 13.5.97.

Registered 13.5.97.

Enclosures 3.

Spare copies

SUBJECT.

Submitting the Assistant Sanitary Engineer's report on the present capacity &c the Bugga springs and also the council's resolution pass thereon—

P.T.O.

14/5 a/19/5

Misc.

Order No. 1235 M. mis. dt [illegible]

Recorded.

2. The attention of the Muni-cipal Council is drawn to the Collector's remarks in para-2 of his Endorsement.

V.R.
7/5/97

8.5.7

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

XD

P. Encl. 1/0

The Chairman, M.C. Cuddapah
Thro' the Collector
Sanitary Engineer.

1/0

O/p 2/5/97

No 770.

Government of Madras.
Office of Sanitary Engineer,
Fort St George, 23rd April 1897

From
J. A. Jones Esqr. Mem. Inst. C. E. F. R. S. E.
Sanitary Engineer to Government,

To
The Chairman,
Municipal Council,
Cuddapah

Sir,

With reference to the Correspondence ending with my No 704/7.4.97, I have now the honor to send you the Assistant Sanitary Engineer's report regarding existing circumstances in reference to the Cuddapah water supply.

2. I agree with the report in every particular and would only add that I am of opinion that the Course adopted by the Council in closing the service pipes was fully justified.

I have &c

(Sd) J. A. Jones.
Sanitary Engineer

(True copy)

Chairman 27.4.97

K.S. 27/4.

Cuddapah Water Works.

COLLECTOR'S OFFICE
20 APR 1892
CUDDAPAH

Report on the present capacity of the Bugga Springs.

The Bugga Springs have diminished in capacity to a very serious extent. The pump works day & night - water in the suction well is pumped down to a level below the infiltration pipes each time; the engine is then stopped for about an hour to allow the water to rise before pumping is resumed. In fact the springs are taxed to their highest yielding capacity, and yet the town does not get its full supply, i.e. the quantity it used to get hitherto. The pressure at the higher fountains is very little & most of them don't get any water until the mains in the lower portions of the town are shut off at 8 A.M. every day.

2. It has been alleged that there is plenty of water in the gallery but that the infiltration pipes are blocked up and hence a sufficient supply does not get to the pumps. This supposition has been found to be incorrect. Under the orders

of

of the Sanitary Engineer, the gallery has been opened out at four places

No 1 - Excavation close to east collecting cistern

No 2 - " 100 feet from Cistern

No 3 - " 170 feet do

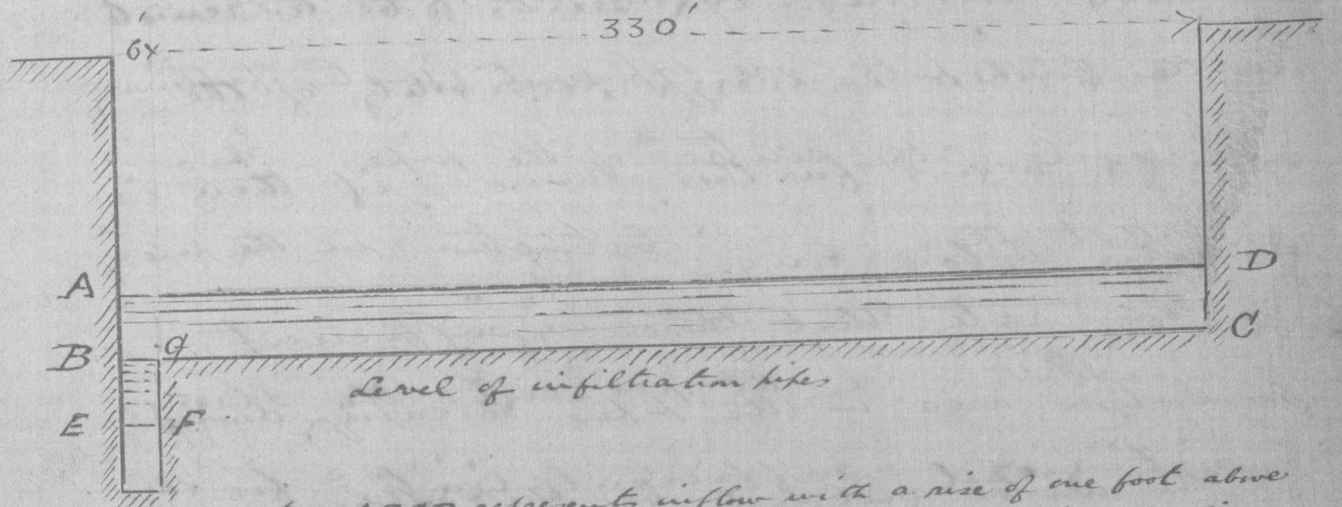
No 4 - " 280 feet do.

No 4 excavation is 50 feet in length & extends up to the head of the infiltration pipes - when water in the cistern is pumped down to the bottom of the infiltration pipes, the pipes in all the four pits are exposed, water falling to the level of the centre of the pipes - This shews that there is no obstruction in the pipes, or at any rate that there is sufficient percolation area in the pipes to carry away all the water yielded by the Springs.

3. The rise of ~~the~~ water in the gallery was observed on two different occasions. Water was pumped down to the level of the top of infiltration pipes - The pumps were then stopped & in both cases water rose 2 feet 4 inches in 1½ hours - The Collector's observations indicate a more rapid rise of water, but it is understood that during the latter observations water was pumped a long way below the infiltration pipes and of course water in the well must

have

have risen very rapidly until it had attained the level of the infiltration pipes. A rise of one foot in the well below level of infiltration pipes means an inflow of only 177 gallons, whereas a rise of one foot above infiltration pipes means an inflow of about 4000 gallons - The sketch below explains the above remark graphically :-



Note:- ABCD represents inflow with a rise of one foot above infiltration pipes

BEFG —— do —— do —— below infiltration pipes.

4. When the works were constructed, a gauge was fixed in the collecting cistern with its zero point level with the top of the filtration pipes. This was the right position for the gauge - The gauge has fallen off. It should be refixed in the position it was before and water should never be pumped below zero level - This matter will be again referred to in this report.

It

5. It is unnecessary to adduce further evidence to shew that the springs are diminishing - now that the gallery has been opened out in various places, a mere inspection of the gallery should convince any body of the real state of the springs.

6. It is impossible to say how far the springs will diminish as the hot weather advances or whether they will fail altogether. The latter contingency seems to be a remote one but there is every possibility of the springs being further attenuated if there is no rain before long.

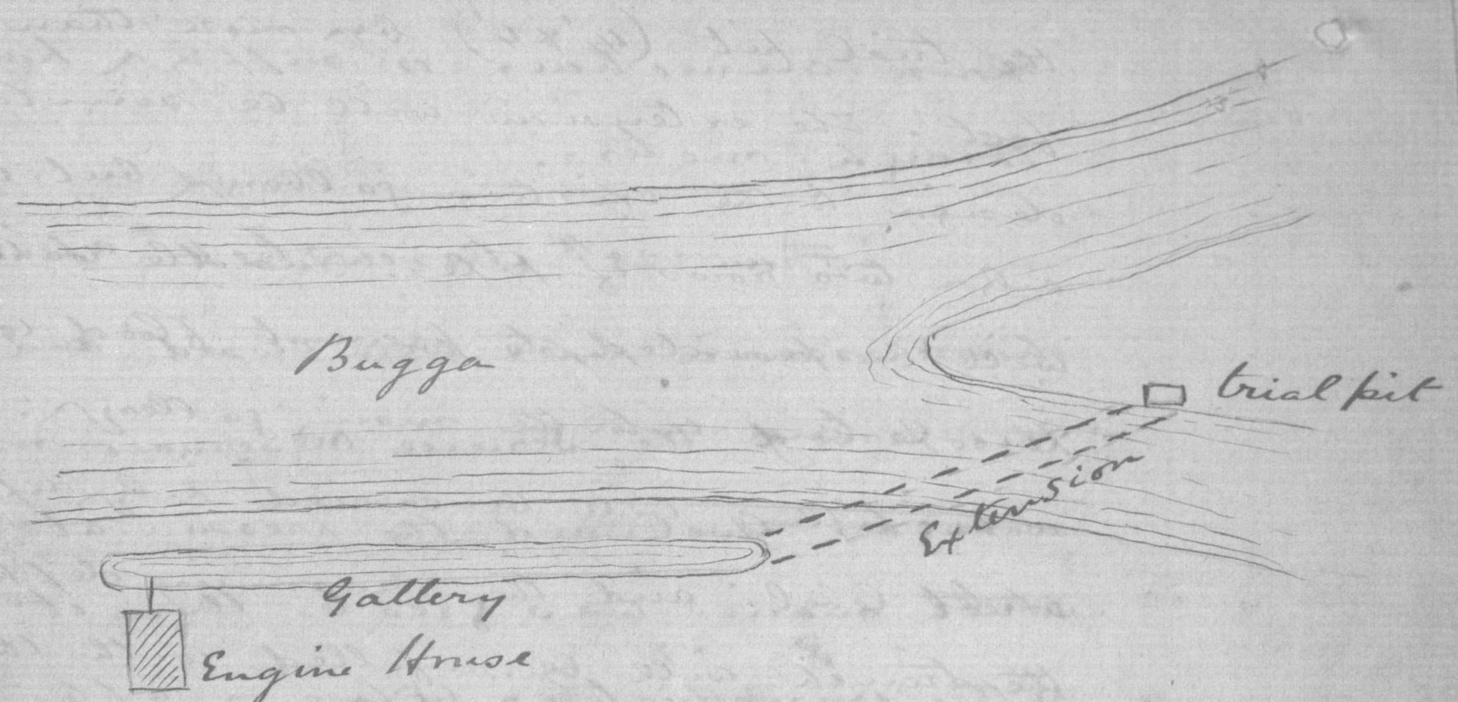
7. As they are at present the springs do not yield sufficient water for the town use and the warning should not be disregarded. Under these circumstances the proposal to shut off house services was a judicious one - It is agreed on all sides that there is a great waste of water from house taps. Of course it will be argued that illegal use of water, i.e., for watering gardens, &c., should be prohibited, but the prevention of such waste of water will require a large staff. At the present juncture

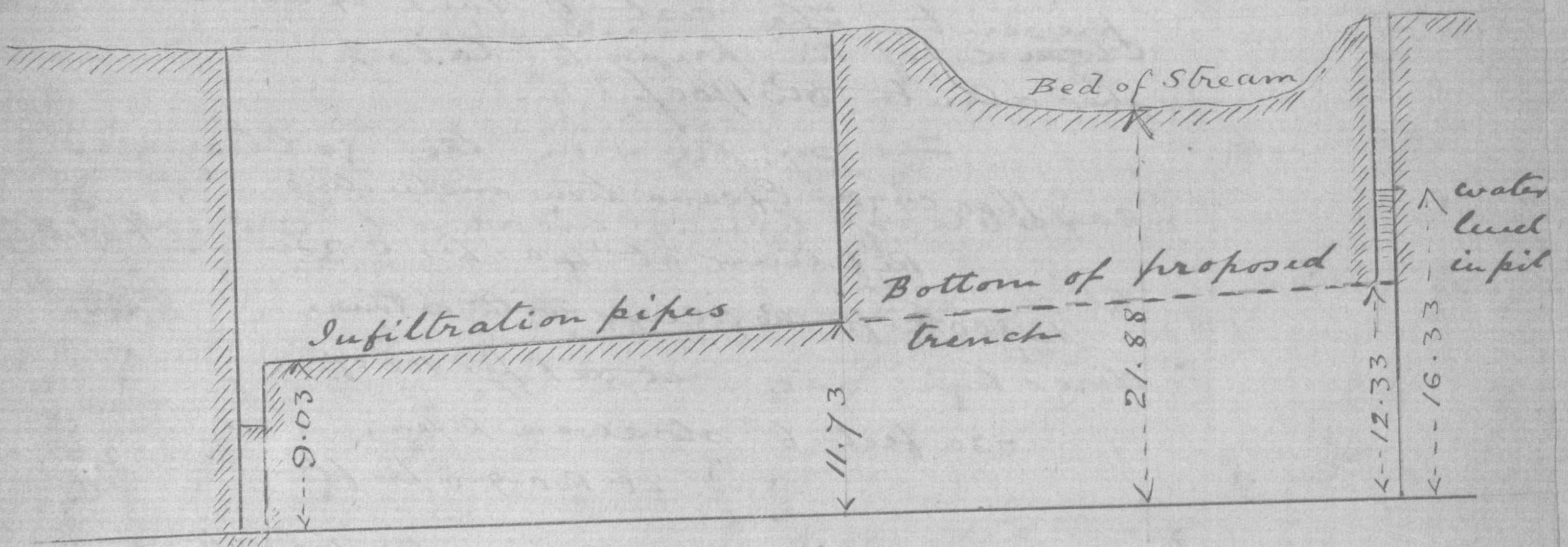
the

the best course would be to shut off house connections or supply houses through meters.

8. From 28th March to 4th April, all house service pipes were closed and during this period the Service Reservoir maintained a higher level and the pressure at the street mains was greater than it was either immediately before, or after, this period, which shews the good effect produced on the public supply by the closure of the private taps.

9. The supply in the gallery is capable of being increased considerably by the extension of the gallery in the direction shewn on the sketch ~~below~~ overleaf.-





The stream that the gallery will cross is rich in subsoil water. A trial pit at the spot indicated on the sketch yielded water at a level 4½ feet above the head of the infiltration pipes. Two sets of men baling water with pots were

were unable to reduce level of water in the trial pit (4'x4') by more than a foot. The extension will be similar in design to the existing gallery but with only two rows of pipes. Puddle walls will be provided to prevent flood water percolating into the main gallery. The stone filling will be carried only up to water level and the remaining depth of the trench will be refilled with the original soil so as to bring the bed of the stream to the condition it is in at present. The cost of this extension will be about Rs 1,100/-

1,600 c.yds Excavation including Refilling at 4 as per c.yd	Rs 400
12,800 c.ft. Refilling with stones at Re 1 per 100 cft	" 128
730 feet 6" stoneware pipes at Rs 0-9-0 per ft	" 410
730 feet cartage & laying at 0-1-0 per ft	" 46
40 c.yds. Puddle wall	" 40
Contingencies	" 76
Total	Rs 1,100

It is quite possible that this extension may give sufficient water to obviate restriction on house service pipes.

10. It must be here noticed that the manner in which pumping is being done presumably under superior orders, by the

the drivers in charge of the machinery, may result in much injury both to the machinery and the springs. At present the pumps are kept running until the water level in the cistern falls a long way below the infiltration pipes and the result is that at the end of each duration of pumping, the pumps drop water, giving thereby a shock each time to the pumps and suction pipe. In consequence of this one flange of the suction pipe is already cracked; while there is so much liability of injury to the machinery by pumping below infiltration pipe-level there is no advantage whatever as regards the quantity of water flowing from the springs. When the level of water falls to the level of infiltration pipes, the maximum flow is reached and nothing is gained by pumping lower except to draw upon the very inappreciable amount of reserve in the suction well. Pumping should be stopped as soon as the level falls to the top of the infiltration pipes. Under present circumstances the best course would have been to keep the pumps going at such a speed as would maintain

the

the water level with the infiltration pipes. But this unfortunately cannot be done as the present maximum flow from the springs is not sufficient to keep the pumps running even at the minimum speed.

(Signed) Hormusji Nowroji
A.M.I.C.E.,

Asst. Sanitary Engineer
to Govt.

23rd April 1897.

'True copy'

Sanitary Engineer to Govt.

2.D.

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the water level with the infiltration pipes- But this unfortunately cannot be done as the present maximum flow from the springs is not sufficient to keep the pumps running even at the minimum speed-

(Signed) Hormusji Nowroji
A.M.I.C.E.

Asst. Sanitary Engineer to Govt

23rd April 1897.

'True copy'

Sanitary Engineer to Govt

Extract from the Proceedings of the Municipal Council, Cuddapah, passed at their special meeting held on Monday [illegible] 97.

Present

Officials

M. W. Elliot Esq. Chairman,

Mr. Ry. V. G. Venugopalapillay Avl.,

Non-officials

The Honorable C. Jambulinga Mudaliar Avl.

B.A. M.L. Rao Bahadur

" V. Tirumala Row Garu

" V. Ramanuja Row Garu. B.A. B.L.

" P. Vencatappa Garu.

" C. Rathnam Mudaliar Avl.,

" G. S. Pitchappa Garu

Business transacted

(1) Read Sanitary Engineers letter No. 770/23-4-97 forwarding Assistant Sanitary Engineers report on the present capacity of the Buggasprings.

Resolution. Resolved unanimously that all house services be closed until there is an improvement in the springs.

Resolved also that the Assistant Sanitary Engineers suggestion to supply houses through meters be adopted and the Chairman be requested to communicate with

with the President, Madras Municipality to obtain the information necessary to introduce the system of supply in this Municipality

Resolved further that the Sanitary Engineer be requested to furnish this Municipality with a plan and Estimate for the proposed Extension of the gallery and that the work be undertaken as a famine relief work. ||

(Signed) M. W. Elliot
Chairman

(True Extract)

Chairman
27-4-97

No. 539

CUDDAPAH MUNICIPAL OFFICE,
Dated 28th April 1897.

Enclosure. 13.

LOCAL & MUNICIPAL DEPT
CURRENT No. 1935 M

From

M. W. Elliot Esquire,
Chairman Municipal Council,
CUDDAPAH.

COLLECTOR'S OFFICE
[illegible]-APR-1897
CUDDAPAH

To

The Secretary to Government,
Local and Municipal Department,
Fort Saint George

Through
The Collector,
Cuddapah.

Sir,

In continuation of my letter No. 429 dated the 6 instant, I have the honor to enclose for information copy of the Sanitary Engineer's letter No. 17* / 21-4-97 and ~~that~~ of the Assistant Sanitary Engineer's report, thereon alluded to, on the present capacity of the Bugga springs, as also a copy of the Council's resolution passed thereon at their special Meeting held this day the 26th instant.

935 M / 21-4-97

* To be returned

9

189 .

Cuddapah Municipal Council

From

The Chairman, Municipal Council,

Cuddapah.

To

The

27-4-97

Forwarded.

The work being an urgent one cannot be postponed till it can be wanted as a famine relief work. It is doubtful if people near Cuddapah would now work for famine wages.

In any case the work is a small one & skilled labour will be required except for the petty excavation. Cuddapah town has not been hitherto considered an 'affected' locality

Dated
Despatched
Received } 189

No.

Enclosures.

SUBJECT.

Camp [illegible]
7-[illegible] 97

[illegible]
Collector

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hen copied [illegible]
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hen signed 22/5
} 189

AD AGAIN G.O., No. DATED
189 .

URRENT No.

ENCLOSURES TO C. No.

RDER OF GOVERNMENT .. .. .. A A A A A A A

LETTER OF GOVERNMENT

STATEMENT WITH DITTO

APERS NOT FILED UP, BEING MEANT FOR DESPATCH IN ORIGINAL.

N.B.—
A = Copy in full.
B = Not to be copied.
P = Copy abstract only.
Q = Copy heading only.