

- (1) பக்கங்களின் எண்ணிக்கை 22
 (2) புதுக்கித் திருப்பிய நாள் 10/89
 (3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் [Signature]

தமிழ்நாடு ஆவணக் காப்பகம்.

47

தமிழ்நாடு அரசு

[Signature]

துறை

அரசாணை எண். மு. கோப்புத் தாள் எண்.	1317	அச்சகம் பலவகை
நாள் :	17.5.1989	1989

109

மடிக்கலே கண்டயடி கையாளலே கூடாது

1A Stock

7+6

Shut out 2, 3, 4+5
Stalmer

17TH MAY 1889, No. 1317 W., PUBLIC WORKS.

1317

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Military Works.

READ—the following papers :—

Report from the Cantonment Water-supply Committee, Bellary, dated 5th Feb. 1889, No. 148.
Endorsement of the Public Department, dated 11th February 1889.
Letter from the Superintending Engineer, III Circle, dated 30th April 1889, No. 253.

ORDER—dated 17th May 1889, No. 1317 W., Public Works.

The first paper recorded above is the report of the Committee assembled under G.O., No. 3609 W., dated 14th November 1888, to inquire into the question of the water-supply to the cantonment of Bellary. The consideration of the report will be deferred pending the results of the investigation of the Tungabhadra project, for which a special officer, Mr. A. S. Russell, Executive Engineer, has recently been appointed.

(True Extract.)

Captain, R.E.,
Under-Secy. to Govt., P.W.D.

To the Public Department.
" Military Department.
" Local and Municipal Department.
" Superintending Engineer, III Circle.
" Chief Engineer for Irrigation.

Exd. J. Henricus.
Spare Copies

BUILDINGS AND ROADS.
MILITARY WORKS.

Govt. of {1889} Madras.

PUBLIC WORKS.

Dated May, 17th.

Recd.

Encl.

G.O., 17th May 1889, No. 1317 W.

MAY.

Water-supply to the Cantonment of Bellary

Consideration of the report of the Committee on the subject of the — deferred pending result of the investigation of the Tungabhadra project.

Comparative statement of rain fall at Bellary.
Height of water in Alipura tank, and in fort ditch for every day in the year from 1st April 1885 to 31st March 1889.

1885				
Month	Days	Rainfall		
April	1-30 th	Nil		
May	1-5 th	"		1319
	6 th	.15		
	7-24 th	Nil		
	25 th	1.55		
	26-30 th	Nil		
	31 st	.85		
June	1 st	.05		
	2-3 rd	Nil		
	4 th	.125		
	5 th	Nil		
	6 th	1.20		
	7-8 th	Nil		
	9 th	.325		
	10-12 th	Nil		
	13 th	1.85		
	14-20 th	Nil		
July	1-8 th	"		
	9 th	.125		
	10-13 th	Nil		
	14 th	.55		
	15 th	.35		
	16-23 rd	Nil		
	24 th	.125		
	25-31 st	Nil		
August	1 st	.50		
	2-10 th	Nil		
	11 th	.20		
	12 th	(Nil)		
	13 th	.15		
	14-31 st	Nil		
September	1 st	.025		
	2 nd	.025		
	3-13 th	Nil		
	14 th	1.50		
	15 th	2.55		

Tank

Alipura

for

revenue

Ditch

Fort

1885 (cont.)

Month	Days	Time full	Time low	Time high
Sept	16-17	16	15	15
	18	15	14	14
	19	14	13	13
	20	13	12	12
	21	12	11	11
	22	11	10	10
	23-24	10	9	9
	25	9	8	8
	26	8	7	7
	27	7	6	6
	28	6	5	5
	29	5	4	4
	30	4	3	3
October	1st	3	2	2
	2	2	1	1
	3	1	0	0
	4	0	0	0
	5	0	0	0
	6	0	0	0
	7	0	0	0
	8	0	0	0
	9	0	0	0
	10	0	0	0
	11-21	0	0	0
	22	0	0	0
	23	0	0	0
	24	0	0	0
	25-26	0	0	0
	27	0	0	0
	28-31	0	0	0
November	1-2	0	0	0
	3	0	0	0
	4	0	0	0
	5-8	0	0	0
	9	0	0	0
	10-30	0	0	0
December	1-18	0	0	0
	19	0	0	0
	20-31	0	0	0

No records for Mississippi Sound

Mississippi Sound

First ditch

15.7"	12.9"
15.9" (highest)	12.7"
15.8"	12.1"
15.8"	12.1"
14.2"	13.8" (highest)
13.11"	12.5"

No records

1886

Month	Days	Time full	Time low	Time high
January	1-31	13.3"	11.5"	13.3"
February	1-28	11.3" Water let down	12.7"	11.3"
March	1-31	10.2"	12.7"	10.2"
April	1-28	7.2" Water let down	11.8"	7.2"
	29	7.2"	11.7"	7.2"
	30	7.1"	11.6"	7.1"
May	1-5	6.1" Water let down	11.2"	6.1"
	6	6.1"	11.1"	6.1"
	7-16	6.1"	10.8"	6.1"
	17	6.1"	10.7"	6.1"
	18	6.1"	10.7"	6.1"
	19	6.1"	10.7"	6.1"
	20	6.1"	10.7"	6.1"
	21	6.1"	10.7"	6.1"
	22-30	6.1"	10.5"	6.1"
	31	6.1"	10.4"	6.1"
June	1st	6.1"	10.9"	6.1"
	2-8	6.1"	10.8"	6.1"
	9	6.1"	11.2"	6.1"
	10-11	6.1"	11.0"	6.1"
	12	6.1"	10.1"	6.1"
	13	6.1"	10.1"	6.1"
	14	6.1"	10.1"	6.1"
	15	6.1"	10.9"	6.1"
	16-30	6.1"	10.8"	6.1"
July	1st	6.1"	10.7"	6.1"
	2-3	6.1"	10.7"	6.1"
	4	6.1"	10.5"	6.1"
	5-11	6.1"	10.5"	6.1"
	12	6.1"	10.4"	6.1"
	13-15	6.1"	10.4"	6.1"
	16	6.1"	10.2"	6.1"
	17-24	6.1"	10.1"	6.1"
	25	6.1"	10.1"	6.1"
	26	6.1"	10.1"	6.1"
	27-28	6.1"	10.1"	6.1"
	29	6.1"	10.1"	6.1"
	30-31	6.1"	9.11"	6.1"

1317

3

1886 (Contd)

Month	Days	Rainfall	Missouri Tank	Kocher Tank
August	1-5		2.2	9.9
	6-11	30	2.2	
	12-17	hil	2.1	
	18-23	65	2.0	9.8
	24-29	hil	2.1	9.10
	30-31	1.65	2.1	9.9
	1-6	hil	7.8	12.5
	7-12	25		12.4
	13-18	.75		12.5
	19-24	hil	7.2	11.8
Sept	25-30	15	7.2	11.8
	1-6	hil	7.1	11.7
	7-12	65		11.6
	13-18	hil	7.5	
	19-24	45		11.5
	25-30	hil	7.1	11.2
	31	125	7.0	
	1-6	hil	7.4	
	7-12	25		11.3
	13-18	hil	7.3	11.1
October	1-8		7.0	11.1
	9-14	1.00		11.6
	15-20	.85	7.6	11.8
	21-26	hil	7.8	11.7
	27-31	10		11.9
	1-6	hil	8.1	11.1
Nov	7-12	15	7.1	10.9
	13-18			10.11
	19-24	.95		
	25-30	.85		10.4
	31	hil	7.5	
Dec	1-6			11.5
	7-12	.225		11.6
	13-18	.40		11.18
	19-24	hil		
	25-31			9.8
January	1-31	hil		9.6
February	1-28			9.4
March	1-31			7.1
April	1-8	hil		7.0
	9-15	15		

1887

1887 (Contd)

Month	Days	Rainfall	Missouri Tank	Kocher Tank
April	10-11	hil	mil	6.11
	12-17	.075		6.3
	18-23	hil		6.1
May	24-29			4.11
	30-31	1.37		4.9
June	1-6	hil		3.8 (lowest)
	7-12	.05		4.9
	13-18	hil		4.9
	19-24	1.30		11.10
	25-30	hil		10.9
July	31	4.00		10.7
	1-6	hil	7.6	10.6
	7-12	.05	7.2	10.8
	13-18	hil	6.0	10.7
August	19-24		5.10	10.11
	25-30	.25		10.7
	31	1.35	6.5	10.6
	1-6	hil	9.0	10.8
	7-12	.15		10.7
	13-18	.75	9.1	10.11
	19-24	.15	9.3	10.7
	25-30	.25	9.4	11.0
	31	2.25		11.0
	1-6	hil	9.3	10.9
	7-12	.075	9.2	10.6
	13-18	hil	9.0	10.7
	19-24	.125	8.10	10.8
September	25-30	hil		10.9
	31	.225		10.6
	1-6	hil	8.9	10.7
	7-12	.80	8.8	10.9
	13-18	.15	9.0	10.8
	19-24	hil	9.1	10.9
	25-30	.15	9.10	10.8
	31	.025	9.1	10.9
	1-6	hil		
	7-12	.65		

4

1887 (cont.)

Month	Days	Rainfall	Albion Lake	Post Office
October	1-2	hil	9.2	10.2
	3	.15	9.1	9.11
	4-8	hil	8.10	9.8
	9	.10		9.7
	10-11	hil		9.7
	12	.15		9.6
	13-14	hil	8.9	9.5
	15	.15		9.5
	16	.60		9.5
	17	.35	9.1	9.9
	18-20	hil	9.8	9.7
	21	.03	8.11	9.6
	22	.015		9.6
	23	.45		9.9
	24-27	hil	8.9	9.9
	28	1.00		10.2
	29-31	hil	8.8	10.1
November	1	.85	8.7	10.1
	2	.25	8.9	10.6
	3	.15	8.10	10.10
	4	.30	8.11	11.0
	5	hil	9.6	11.2
	6	.05		11.0
	7-9	hil	9.5	10.2
	10	.10	9.4	9.11
	11-30	hil	8.7	11.8
	1-7	hil	8.4	11.6
	8	.30	8.3	
	9-28	hil	hil Water pump off	
	29	.15		
	30-31	hil		
January	1-31	1888		
February	1-29	hil		
March	1-31	hil		
April	1-15	hil		
	16	.05		
	17-21	hil		
	22	.60		
	23-30	hil		
May	1-5	hil		
	6-11	hil		

Month	Days	Rainfall	Albion Lake	Post Office
May	12	2.155		5.6
	13	.155	7.8	8.4
	14-23	hil	Water pump off	12.3
	24	.325		12.2
	25	hil		12.1
	26	.005		11.10
	27-31	hil	4.8	11.9
June	1-2	hil	4.6	11.9
	3	.005	4.5	10.11
	4-16	hil	3.7	10.10
	17	.25	pan dry	10.3
	18-30	hil	hil	9.10
July	1-8	hil		9.9
	9	.10		9.8
	10	.10		9.7
	11-12	hil		9.7
	13	.20		9.7
	14	.30		9.6
	15-16	hil		9.5
	17	.025		9.5
	18-22	hil		9.5
	23	.025		9.5
	24-31	hil		9.5
August	1	.075		9.5
	2	hil		9.5
	3	.10		9.5
	4-14	hil		9.5
	15	.375		9.5
	16	hil		9.5
	17	.50		9.5
	18-31	hil		9.5
Sept.	1-3	hil		9.5
	4	.175		9.5
	5	.170		9.5
	6	.05		9.5
	7	hil		9.5
	8	.025		9.5
	9-10	hil		9.5
	11	.10		9.5
	12	hil		9.5
	13	1.45	5.8	9.5
	14	1.00	6.6	9.5

1888 (Contd)

Month	Range	Water level	Water level	Water level
September	15-20	2.2	7.7	9.9
"	21	2.5	7.8	"
"	22	2.4	"	"
"	23	2.4	"	"
"	24	2.5	"	"
"	25	2.6	7.11	9.8
"	26	2.6	7.10	"
"	27	2.7	7.11	9.10
"	28	2.8	7.11	"
"	29	2.9	7.11	"
"	30	3.0	7.11	"
October	1-4	3.1	7.11	10.8
"	5	3.2	7.11	9.11
"	6-24	3.3	7.11	9.8
"	25	3.4	7.11	"
"	26	3.5	7.11	9.4
"	27-31	3.6	7.11	9.2
November	1-5	3.7	7.11	9.3
"	6-10	3.8	7.11	9.4
"	11-15	3.9	7.11	9.5
"	16-20	4.0	7.11	9.6
"	21-25	4.1	7.11	9.7
"	26-30	4.2	7.11	9.8
December	1-5	4.3	7.11	9.9
"	6-10	4.4	7.11	10.0
"	11-15	4.5	7.11	10.1
"	16-20	4.6	7.11	10.2
"	21-25	4.7	7.11	10.3
"	26-31	4.8	7.11	10.4
January	1-5	4.9	7.11	10.5
"	6-10	5.0	7.11	10.6
"	11-15	5.1	7.11	10.7
"	16-20	5.2	7.11	10.8
"	21-25	5.3	7.11	10.9
"	26-31	5.4	7.11	11.0
February	1-5	5.5	7.11	11.1
"	6-10	5.6	7.11	11.2
"	11-15	5.7	7.11	11.3
"	16-20	5.8	7.11	11.4
"	21-25	5.9	7.11	11.5
"	26-31	6.0	7.11	11.6
March	1-5	6.1	7.11	11.7
"	6-10	6.2	7.11	11.8
"	11-15	6.3	7.11	11.9
"	16-20	6.4	7.11	12.0
"	21-25	6.5	7.11	12.1
"	26-31	6.6	7.11	12.2

1889

Water being let down 7.0
Water let down 9.30
Water 7.75

W. Smalley Col
Superf. Engineer
3rd Circle

30/4/89

No. 253.

Superintending Engineer's Office,
3RD CIRCLE,

Bellary 30 April 1889.

From,

Col. W. Smalley Col
SUPERINTENDING ENGINEER,

IIIrd CIRCLE.

To,

THE Chief Engineer

Sir,

1317

Madras

Your Memo No. 1095C dated 5th
March 1889.

Enclosures.

Statement of
W.

The Statement in my Memo
to the Collector of Bellary appended to
the report of the Committee on the Water
supply to the Cantonment that it would
take 10 1/2 inches of rain fall in the catchment
to fill Aliore Tank an inadvertent on in
your Memo under reply, was not meant to
imply that in ordinary years the tank would
be filled by that, or the whole yearly rain
fall averaged at 16 1/2 inches, but only that
it would take at least that amount of
rainfall on the catchment to fill it and
it should have been added if continuous

tank filling rain. No argument was based on this bare statement. On the contrary all my suggestions were and are to enlarge the catchment of Alipore and Fischer's tanks as far as physical limits would permit in order to bring every drop of rain possible into them for storage.

2. I forwarded a compilation of the rain fall Register maintained in the Executive Engineer's Office from April 1885 to March 1889 inclusive, compared with the Register of Alipore tank for the same period as far as available, and of the Fort Ditch. For Fischer's tank no register has been maintained hitherto: no note has been made in the Registers hitherto, of how much water was let down to the Fort Ditch or what depth passed off to waste over the weirs of Alipore and Fischer's and the Fort Ditch weirs respectively, nor of the surplus discharged by the Chuttrun Nullah over the Annicut.

- In future the Registers must shew daily
- (a) Water passing over Chuttrun Nullah Annicut
 - (b) Do. through Do. Do. sluice
 - (c) Do. over Alipore tank weir
 - (d) Do. through Alipore tank sluice
 - (e) Do. over Fischer's tank 2 weirs.
 - (f) Do. through Do. 2 sluices.
 - (g) Do. over Fort Ditch weir.
- 1317

We might also have contoured plans of Alipore tank, Fischer's tank and the Fort Ditch and surveys of their catchment area including extended catchment and fixed Bench Marks on the weirs and sills of sluices. The plans we have are not to be depended on and there have been alterations since they were drawn which are not marked on them. I propose that the whole scheme be resurveyed and levelled. A pierage should probably be maintained independently at Alipore tank.

7

3. The catchment of Alipore tank is divided into 2 parts viz^t that of the Chut-
trum Kallah which is turned into the
tank. 6.43 Sq. miles (and which it
was proposed to increase to 9 Sq. miles
by turning another Kallah into it, but
this was never carried out); and that
independent of the Chuttrum Kallah
2.5 Sq. miles. The full supply is given
at 22.72' on the sluice gauge but the great-
est recorded supply is not more than 19' in
November 1874, when it was mentioned,
it was not considered safe, to let in more
having regard to the bank and settlements.
The tank is calculated to hold 94 millions
cu. ft.

On looking through the comparative
register sent herewith, it will be observed
at the heaviest rain fall in one day
recorded during the period to which it

refers was on the 30th June 1887 4" which ^{raised} ~~records~~
Alipore tank from 0 to 7'6" and the Fort Ditch
from 4'9" to 11'10". There had been rain previ-
ously which must have saturated the ground
more or less. The highest record for Alipore
tank is 8' Nov. 1885. 15'9". This was after
heavy rain in the previous 2 months. The
total rain fall of that year was exceptionally
heavy, nearly double the average. The high-
est record for the Fort Ditch is Dec. 18'6"
13'8". The lowest record for Alipore tank
is nil the water from it being let down
to the Fort Ditch about the 1st March an-
nually. The lowest record in the
Fort Ditch is 3'8" on the 22nd June 1885.
(317)

I have the honour to be,
Sir

Your most obed^t servant.

H. Smalley Col. R.E.

Supg. Engineer
3rd Mile

8

memo no 10950 of 5.3.89
 S. O. No 360 of 14-11-88
 " " 239 of 14-4-88
 " " 108 of 6-1-86
 " " 958 of 13-11-85
 " " 955 of 13-11-85
 " " 924 of 4-4-84
 " " 2642 of 22-8-86

From, *P. H. C. No 3987*
 The Superintending Engineer,
 IIIrd Circle,
 Bellary

To, The *Chief Engineer*
P. H. C.
Madras

Dated 30 } *April* 1889
 Received 3 } *5*

Enclosures. /

No. *253*.

Subject.

*Reporting on the water
 supply to the Cantonment of
 Bellary.*

Q.S. 41/5. Am 10/5.

*1317 W
 3989*

Bellary Water Supply

W *(4)* *1317*
 In my notes on this
 subject I have advocated
 the tentative measures,
 A. B. C recommended
 by the Committee, being
 carried out, and the
 fact that the Tungabhadra
 project is about to be taken
 up, seems to me an
 additional reason to
 avoid any expenditure
 on works, connected with
 the improvement of the
 Bellary water supply,
 that may afterwards
 require modification
 in connection with that
 project.

*W. C. M.
 6.5.89*

I do not think that
 any money should be
 spent on carrying out the
 proposals of the Committee
 pending the result of the in-
 vestigation of the Tungabhadra
 Project for which person
 Mr Russell has been lately
 appointed.

*Russell
 9.10.89*

B. R. R.
m. works

PUBLIC WORKS DEPARTMENT.

1317

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 14th January 1889

READ the following

Report from the Cantonment
Water Supply Committee, Bellary } H. E. Jones No 148 of Feb 5. 1889
Endorsement Public Dept. (" 1095 of " " "
Letter from the S. E. III (note (" 253 of Apl. 30. "

The first paper
recorded above is the
report of the Committee
assembled under G.O.
3609 W dated 14th November
1888 to inquire into the
question of the water
supply to the cantonment
of Bellary. The considera-
tion of the report will
be (O

1st
13th May

10

be deferred pending the
 results of the investigation
 of the Jungabhadra
 Project, for which a special
 officer, Mr. A. S. Russell,
 Executive Engineer, has
 recently been appointed.

Quads

10.5.89

WMS
 16.5.89

and
 17/5/89

my

- 30
 The Public Dept ✓
 " Military ✓
 " Local & Mun. ✓
 " SE III Circle ✓
 " CE for I ✓

23/5/89

R.S. 24.8.41/5. H.W. 10/5. 24/5.

13/7

||

||

23/6/31

G.O. of 1889, Mysore.
PUBLIC WORKS.

18/1

Dated

Recd.

Encl.

G.O. 17 May 1889 No. 1374

Water Supply to the
=
Campment of
=
Bellary
=

(11)

Consideration of the
report of the Committee
on the subject of the
— deferred printing
result of the investi-
gation of the Tung-
bhadra Project.

100
8

23/6/31

8/10/31