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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue. DEPARTMENT

G.O. No. 433 ~~Press~~
B.P. No. Mis.

Dated 3-3-1875 ~~196~~ .

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department,
18th Sept[illegible] 1874.

No. 391. Read the following endors[illegible] the Chief Engineer for Irrigation,
dated Ootacamund, 20th [illegible] 1874, No. 27 :—

From J. H. LATHAM, Esq., Chief E[illegible] a[illegible] Manager of the Madras Irriga-
tion and Canal Company, [illegible]enant-Colonel J. MULLINS, R.E.,
Chief Engineer for Irrigation, [illegible]urnool, 13th August 1874, No. 98.

July [illegible]

I HAVE the honor to enclose copie[illegible] [illegible]pper and Lower Sections Reports,
together with my own, for the month [illegible]74.

MADRAS IRRIGA[illegible] AL COMPANY.

Chief Engineer's Report to acc[illegible] *nal Reports for July* 1874.

THE middle of July has been very wet. [illegible] th was, as usual, cloudy, healthy, and
pleasant ; but the continuous breeze carried [illegible] ss the country too rapidly for them to
fall in rain, until the 12th ; if we except one [illegible] n the fourth, which fell over the Bowa-
nassy and Koonder valleys. During the ne[illegible] the breeze irregularly yielded, and has
since been gentle and light. It was during [illegible] ce that rain fell heavily, in the upper
division an average of 10·14 inches, in the lo[illegible] aking a general average of 9·82 inches.
At Kurnool 7·78 inches only fell, half of it in [illegible] that of the 19th. The only heavier rain-
fall recorded for Kurnool in July is for 1871. [illegible] it was only 1·75.

2. This is the first rain which has well [illegible] new enlarged calingulahs. These had two
feet to three feet flowing over them in the 1s[illegible] and six feet in the 7th. All stood well,
and I have not heard of the displacement of [illegible] The rain also tested the canal banks by
suddenly raising the water from two to three [illegible] e 1st section, and seven feet in the 7th,
making totals of seven and eight feet in the 1s[illegible] nine feet in the 7th. Unfortunately the
unwelcome certainty of a liability to vermin h[illegible] ening just above the usual surface of the
water rec[illegible]ed some decided confirmation ; two s[illegible] leaks occurring in the sixth mile, which the
villagers would not turn out to attend to when ca[illegible] upon by the canal bankers during the rain,
and which consequently ran for thirteen hours be[illegible] they were attended to ; also one breach being
found in the 21st mile, close to the banker's hut. [illegible] man, no doubt, was absent, and his account
of it fictitious. It was not in a place that had g[illegible] trouble before. There was also a leak in the
bank at Kaderbagh, which stopped of itself whe[illegible] water fell. When it is considered that this
was all the damage done to the banks of the can[illegible] a length of 180 miles (including the Soon-
kisala flood banks), it may be safely said that no [illegible] eer in India can call them dangerous banks,
without condemning also every road, railway, t[illegible] canal, barrack, and public building in the
country. It is admitted that vermin are danger[illegible] o banks.

3. The most severe strain on the banks oc[illegible] l in the 7th section, where three Govern-
ment tanks burst a few miles above the cana[illegible] n quite full, and sent their water not only
down the ordinary river course but also across [illegible] y, so as to turn the bank returns and over-
flow the banks into the canal. This drainage is [illegible] esigned to be received into the canal which
is open to the drainages, and has return bunds to [illegible] ain the canal water when the rivers are dry.
These or the canal bank on the upper side near [illegible] m had, of course, to breach or be breached,
when the water rose behind them. The remainin[illegible] canal bank, which retains the canal water, was
uninjured, though the water rose three feet abov[illegible] he designed full water level. This bank has
therefore safely stood a foot more than the two fe[illegible] test proposed by Government in 1871, and we
shall *all* in future be easy about it.

4. In both the above cases Mr. Wilks in the upper division, and Mr. Dumphy in his range
or sub-division, have been unremitting in their att[illegible]ention to the canal and irrigation. Mr. Dodson,
too, has passed on the ordinary work in his charge as fast as rain would allow.

5. The Deputy Collector of Kur less, been working in the Company's cause. He
has personally visited the villages north ial, chiefly in the 6th section, which were so
obstinately backward last year. The im ces has been to induce all to try some irrigation
more or less, and the ultimate effect mu spread of irrigation in these villages. He,
as well as the Company's Engineers, in sanctioning the new rules, and report
much irrigation lost by the delay, and n where otherwise wet crop would have been
put in; that is unavoidable.

6. It is, as yet, too early to pre ble cultivation.

KURNOOL,
11th August 1874.

(Signed) J. H. LATHAM,
Chief Engineer and Manager.

Register of month of July 1874.

Month and Date.	Soonkissala.	Kurnool.			Ayaloor.	Chinnacoonta.	Dhoor.	Adamapilly.
	I. D.	I. D.		D.	I. D.	I. D.	I. D.	I. D.
1st July	......	......			0 20	......	0 07	......
2nd "	......	......			......	......	......	......
3rd "	......	......			1 60	0 44	......	......
4th "	......	......		5	0 64	0 10	0 70	0 50
5th "	......	0 13		0	......	0 24	0 19	0 68
6th "	......	......			1 98	......	1 03	0 40
7th "	......	......			0 10	0 19	......	......
8th "	......	......			0 08	......	......	......
9th "	......	......			0 81	......	......	0 50
10th "	......	......			......	0 21	......	......
11th "	......	......		55	0 10	0 13	0 66	......
12th "	0 60	0 20		15	0 20	0 47	0 03	......
13th "	......	......		18	0 10	0 51	0 42	......
14th "	0 30	0 07		35	0 93	......	0 65	0 45
15th "	0 40	0 18		30	......	0 95	......	0 40
16th "	1 40	0 45		65	1 42	0 40	0 43	1 50
17th "	0 10	0 60		......	0 07	......	2 93	1 40
18th "	......	......		......	......	1 01	......	0 80
19th "	3 30	2 33		55	2 95	0 89	2 58	1 30
20th "	1 90	1 67		15	1 03	0 20	0 78	0 80
21st "	0 60	0 25		15	0 35	0 09	0 04	......
22nd "	......	0 44		0 20	0 15	0 19	0 03	......
23rd "	0 40	0 09		0 10	0 67	0 11	0 08	......
24th "	......	0 05	0	0 25	0 35	0 11	0 04	......
25th "	0 50	0 47	0	0 65	......	......	......	......
26th "	......	0 01		......	......	......	......	......
27th "	......	......		......	......	......	......	......
28th "	......	......		......	......	......	......	......
29th "	......	......		......	0 15	......	0 05	......
30th "	......	......		0 35	0 19	......	......	......
31st "	......	......		......	......	0 44	......	......
Total...	9 30	7 78	6	18 25	15 75	6 89	10 51	8 23

(Signed) A. J. DODSON,
Conservancy Engr., Lower Divn.

(Signed) C. H. WILKS,
Conservancy Engineer, Upper Division.

U CTIONS.

Monthly for July 1874.

The rain has been very heavy during a art of the month especially at Velapanore. The
total for the month is as follows:—

Soonkissala	... ...	9·30 inches.
Kurnool	... ...	7·78 ,,
Jupaud	... ...	9·92 ,,
Velapanore	... ...	13·55 ,,

2. Early in the month I made a tour some of the villages in the old 5th section, as
as had been described, to put their tract o into a more complete state as regards efficient

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d means for preventing damage by rains he rain however was so constant that I was
unable to do much beyond a commencement at , and to determine a site for the bridge over
the Cumbalpully sluice outlet. The Amins, ho , are all at work with the survey in preparing
the village maps for the network of channels d d to supply every individual field. They are
frequently delayed by the constant rains an state of the roads and fields. On the 17th I
returned to Kurnool.

3. On the morning of the 19th (Sunday ived of a breach, and it was found that a
breach averaging 66 feet wide had been made at 20 miles 54 chains. 3·32 inches of
rain had fallen during the night, and raised th bout six feet in the canal, and although
the shutters had been opened at Purthapaud No. 13 calingulah, the water seems to
have found a bad place hitherto unsuspected of this bank was nearly 30 feet.

4. On Monday (20th) coolies were made across the canal at the mo t
convenient spot below Kurnool. This was up the supply as well as to prevent
rain from damaging the repairs. As it h inst a head of water, the closing gave
some trouble, and it was on this account a the wet state of the breach that work
only commenced fairly on Thursday the 23r owing Thursday the 30th it was closed
to bed level, and rapidly raised on the two when the dams having been removed
water was again let down. It reached the sit on Saturday the 1st August, and passed
on to the canal below, after filling up agains k nearly sixteen feet in depth by the next
morning. When not prevented by rain, wo ued night and day; no means were left
untried to employ as much labour as could ob t on the work. At least one quarter of
the earth had to be brought from a distance o hs of a mile, and the rest from an average
of more than a furlong.

A thoroughly well puddled slope of the e width was brought up on the canal slope,
and the remaining filling was carefully ramme out and brought up in horizontal layers.

5. The heavy rains had so filled the ta n the lower part of my section the water
subsided very slowly, so that I am in hopes th *no* failure below. At Kurnool complaints
were made of the delay; but, as most of the se ot sown, and only a portion of the villages
ran short, very little loss was occasioned by th

6. Four leaks occurred in the 1st section hey were all quickly repaired, as well as one
at Kaderbagh.

Dist on.

The new rules were distributed as soon as th ould be obtained, but from the circumstances
noted above, no time was left me to attend to I am happy to say that the Curnums are
sending in applications daily, and in a short ti e shall be able to judge of the effect of the
change of system, although the delay caused by each has been against us.

7. There has been much fever about, but one of the Overseers has reported sick. In
consequence of other urgent work, the bankers ot paid until from the 22nd to the 28th. The
staff is also very small.

(Signed) C. H. WILKS,
Conservancy Engineer.

LOWE IONS.

Monthly Repor July 1874.

I HAVE again to regret that the progress the works of repair in the Main Canal and
Distribution channels has been much retarded by e heavy rainfalls of the month, more especially
in the Nundial Taluq, where they caused a succ ssion of floods not equalled since the commence-
ment of the canal works.

2. On the 16th instant the fall of rain mus have been very heavy on the hills to the east
of the Caulee river; for the Government tanks belonging to the villages of Naranapuram, Thana-

laiceruvu, and Thanalapuram were breac their contents rushing down the v

* Above the upper canal bank.
(Initialed) J. H. L.

r the country until stopped by the ca
s near Jutoor where a tank was formed
until rising above the top of the canal bank, d them through five gaps, in all 202 feet
long, and flowed into the canal.

3. At the same time the nullahs w canal opposite calingulahs Nos. 6 and 6 A
were filling that part of the canal un se 9 feet above bed and rushed over their
crests 6 feet deep, or to within 9 inche of the arches, and this although the calin-
gulah crests have been lowered to with level and all their sluices were fully open—
a severe test of the stability of these stood well.

4. In the meanwhile the river feeder of the Nundial north tank, had
burst its banks and flooded great pa was headed up at aqueduct No. 20 in
the 106th mile until it rose above ch is 7½ feet above bed, and flowed into
the canal. Part of the Palar river water into the Ayaloor tanks, and the
ryots of that village unwilling to lo d sown in their beds cut their bunds and
allowed the water to rush down over t cepted by the spoil banks of the canal in
the 109th mile; it rose in the vagu p nal by culvert No. 20, until the pressure
of the head of water greatly endanger at structure, and also flooded the whole of
the Ayaloor bungalow and its compou avoid the danger of culvert No. 22 being

* Or upper.
(Initialed) J. H. L.

n up, Mr. Dumphy cut the eastern bank* of
canal just below, and allowed the flood to
down the canal into the 8th section.

5. The result of so much water canal, at the Jutoor breaches, at the calin-
gulahs and at Ayaloor, was that the wate bove bed, and running down to lock No. 1
in the 118th mile was there headed up ped the upper gates and filled the lock, and
that, although all the discharging sluices ape channel just above lock No. 1 were fully
open, with some difficulty Mr. Dumphy s opening the valves of lock No. 1, and let the
water pass down into the 9th section.

6. Just above lock No. 2, a new ir uce for the village of Yalloor was being built
protected by a ring dam amply strong for of water expected in that part of the canal;
but before it rose to 6 feet of course it car the dam and partially destroyed the incom-
pleted masonry work, and flowing over the w unfortunately injured a large extent of their
crops.

7. The river Cailee at Jutoor anicut 15½ feet above the head sluice cill; but, as all
these sluices were shut, only a little leak into the canal, and all the works of the anicut,
head and under-sluices, have (as far as we tain at present) received no injury, except a
few chains of revetment lately built to he opposite bank of the river which has been
partially carried away.

8. Throughout the whole of the 7 ections, which had to stand the severe test of
this sudden flood, the only injury done t ry works has been the breaking up of part of

* A small side drain, 15 feet long on the cr
(Initialed) J.

† Under construction.
(Initialed) J. H. L.

he flooring at calingulah No. 2* in the 7th
ection, and the injury to Yalloor sluice† in
he 8th section; such a result after such a trial
their stability is, I think, very satisfactory.

In the 8th section the slopes of the cutting locks 13 and 15 had been repaired just before
the heavy rains of the 16th, and much silt taken out and rammed into the gullies was
washed down again. At Ooralloor bridge he 145th mile, a culvert was building under the
western approach; the arch had been keyed e night before, and the centrings being still in
caused the flood to rise until they cut awa ent one chain of the lower end of the approach,
but did no injury to the masonry work. Rajooli anicut, the water rose to 2 feet above the
event, but I examined all the works there last k, and found no injury done to any of them.

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9. In the 9th section no injury has b to any of the works on the Main Canal,
although nearly 4 inches of rain fell on the ni 6th; but some of the irrigation channels
have been slightly injured, and all the works nd addition which were in progress on
them were greatly delayed by the continuous he repairs to the locks in this section
have been completed; also the new sluic

10. Water was let down this sectio ly, and was at the end of the canal by
the 24th. I have kept it about 1 foot dee being washed in; as soon as the ryots
ask for water it can be increased in a few nair has been throughout the month
rising and falling rapidly; its greatest th instant, when it rose 12 feet over
the head sluice cill, but no injury had e works.

11. The commencement of irrig been delayed by the new rules not
being authorized until the 3rd July, but of giving the water tickets through
the Village Curnums will work well. strict we are giving the water tickets
through our Overseers and Amins as only with the new rates. I have no
doubt the total area we shall irrigate increased very largely; but I doubt
whether the income realized will excee n, owing to the great reduction in the
rates for fields irrigated for the first, secon ns.

Reticula Maps.

12. The progress made in this work od as I had expected, chiefly owing to
my Surveyor M. Kistnia having been abs from 20th March to the 1st June, and
having resigned his appointment on the at he was only at work six weeks since
20th March; but he has completed thirtee ndial and Sirwell taluqs, included in
twenty-three sheets, four of which howev reticulated by the Chief Engineer when
in camp. In Proddatur taluq Mr. F. Griffi ve villages, and all the above will be
copied as soon as I can lay down on them th channels and bounds of Company's land.

13. I enclose the rain registers as kep ons, the one at Jutoor is not included,
as I doubt the accuracy of the observations Tindal there.

14. In conclusion, I wish to say that J. O. Dumphy, Assistant Engineer, has
shown great energy and judgment in comb the difficulties of these floods, although
suffering at the time from fever and rheum ed, I believe, by having to live in a damp
bungalow, surrounded by a flooded compou

(Signed) A. J. DODSON,
Conservancy Engineer.

SUBMITTED for the information o nment. It will be noticed with satis-
faction that the very heavy rainfall did but little damage to the Com-
pany's Canal. The water did not rise full supply level in the 1st Section,
Soonkissla to Kurnool, 18 miles, but i th Section it attained to three feet
above F.S.L., and it is gratifying to fi this test was successfully stood.

2. The attention of the District eer, Kurnool, has been called to the
state of the tanks of Naranapuram, T cheruvu, and Thanalapuram, which
breached and caused some damage t canal upper bank in the 7th Section.
The cutting of the bunds of the Ayaloo s by the ryots in order to save crops
in their beds has also been brought notice of the District Engineer, by
whom, in communication with the Reve ficers, the matter should be inquired
into. It will be necessary to ascerta ther the water in these tanks was
above full supply level when the bun e cut; possibly the crops referred to

were not in the bed proper of the ut just beyond their contours. These and all other tanks above the can uld be provided as soon as possible with adequate surplus weirs.

3. A complete list of all with the information regarding them required by this office circular been called for.

(Signed) MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 392. ORDER THEREON mber 1874, No. 2,663.

IRRIGATION, No.

s EXCELLENCY the Governor in l has read with interest the s of the Chief Engineer and of the Divisional Officers, Madras Irri l Company, for the month of July. The rainfall throughout the cou by the canal was remarkably heavy, and it is satisfactory to find th lamage was sustained, and that the necessary repairs were promptly

2. His Excellency in Coun ith approbation the interest shown by the Deputy Collector Ramachend e extension of irrigation.

3. Early attention should b the District Engineer to the state of all tanks lying above the canal. I ed that the Chief Engineer for Irrigation has issued the necessary instr this subject.

(ract.)

(Signed) JO LLINS, Lieut.-Colonel, R.E.,
Joint Secretary to Government.

[True Copy]
Asst. Secty
Major R.E.
Under Secretary to Govt. P.W.D.

To the Chief Engineer and Manager of the M s Irrigation and Canal Company.
,, District Engineer, Kurnool.
,, Chief Engineer for Irrigation.
,, Revenue Department

Exd. E. C. Shanks.
Spare Copies.

No. 111

Revenue Departm

Govt. of [illegible]

PUBLIC WORKS.

To

THE CHIEF ENGINEER for IRRIGATION

[illegible] IRRIGATION COMP

Dated September 1874.

Recd. March 3rd/75 Encl.

Dated [illegible] September 1874, Nos. 393

SEPTEMBER

Nos. 391 392.

Madras Irrigation and Canal Company. —Passing orders on note by the Chief Engineer for Irrigation on the report of the works of the Company for [illegible] of July 1874.

No. 433

Commd. to the Board of Revenue

3rd March/75

[illegible] Board