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(2) Date of repair July 86.

(3) Initials of the Referencer Lons

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue - DEPARTMENT

G.O. No. ~~B.P. No.~~	1434 (~~G.T.~~)	Press. ~~Mis.~~
Dated	10-6-1878	197—.

G.P

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

20th May 1878, No. 424 I.

Irrigation.

Read the following paper :—

No. 89. Endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 13th May 1878, No. 131 I.

From C. H. WILKS, Esq., Acting Chief Engineer and Manager of the Madras Irrigation and Canal Company, to the Chief Engineer for Irrigation, dated Kurnool, 29th April 1878, No. 59.

Monthly Reports.

I HAVE the honor to forward per book post Upper and Lower Division reports, together with the Chief Engineer's, for the month of March 1878.

MADRAS IRRIGATION AND CANAL COMPANY.

UPPER DIVISION.

Monthly Report for March 1878.

WATER in canal at Soonkesala fell from 4·0 to 2·5 on the 31st of the month; at Jupad it fell from 3·3 to 1·4.

2. The weather was unusually hot throughout the month. About the 20th some thunderstorms occurred and 0·60 cents. of rain were registered at Velapanoor and somewhat less at other stations. After that date it became very hot, and towards the end of the month fierce hot winds were blowing the greater part of the day.

3. *The repairs* to be commenced have been pointed out to Overseers. The most important will be begun in April; they are—

(1.) Puddling the bank of Yedaroor tank (6th mile). For this Mr. Maltby has prepared sections. Good puddle is very difficult to obtain. For the present I have ordered it only to be brought up to 6 feet above bed all along the bad parts of the bank.

(2.) Raising bank in a few places below Kurnool. For this Mr. Maltby will supply sections.

(3.) The body wall of calingulah No. 13 has to be plastered, as it leaks excessively.

(4.) Ulloor aqueduct has to be replastered.

(5.) Muddigutla bridge approaches will be finished when water is out of the canal.

(6.) Repairs to revetment in Tongadancha tank. Here arrangements are being made to cart stone at once. If contractors turn up it will be given to them at fair rates; so far they have asked very exorbitant prices for work. I have no doubt it will be done in time to pass water. Sections were taken at every chain on the dangerous parts.

(7.) In the 5th Section a general examination of parts requiring protection to the bank is about to be made, and sections will be taken showing the work to be done. Water has not yet subsided.

(8.) All locks to be cleaned out and repairs to the leaking made.

(9.) Shutters to the waste sluices of calingulahs Nos. 6 and 9 of 7th Section have to be renewed.

(10.) Besides these there are many small works too numerous to specify. Repair of Upper Cilt Lock No. 9 has been commenced.

4. *Construction—Plank-houses.*—From the latest information at No. 1, Calingulah Nos. 3 and 9, 12, 13, Poodoor Point, Ulloor, Mallayala Calingulah, and No. 4 in the 4th Section, they are completed. At Muddigulta No. 1 Calingulah, No. 2, No. 6 (7th Section), and No. 9 they are in progress.

Teercherla Main Channel Extension.—Of this about 2½ miles are nearly finished and much more would have been done, but I stopped putting on new gangs, as the Chief Engineer ordered it I understood owing to shortness of funds. I have since heard that funds are available and work will again be allowed to proceed.

The widening o[illegible]e aqueduct will be commenced at once.

Repairs to the canal from 75th mile[illegible] No. 2, 80 miles 49 chains, are just commenced. This is the most difficult task I have to [illegible]sh. A good gang of Wuddahs have taken work at the lower end, and Inspector Mon[illegible] has started the work near Lockinsula. I am obliged to commence with daily coolies m[illegible] my dislike; but contractors are very slow in coming forward and not to be depended on. Preparations have been made for starting work at the masonry weirs and bridges; some contra[illegible]ors (masons) are ready to commence by the end of this month; I hope to have the most important foundations in.

Irrigation.—During the month little new irrigation was registered.

Settlement of Ramalkota was made in Kurnool and finished on the 1st April. The Nundial Taluq was commenced on the 5th April.

There is every hope that all settlement will be completed by July this year, which will leave me free to attend to my other numerous duties.

On the 30th March I received charge from J. H. Latham, Esq., who left that evening for England.

The staff were paid from 4th to 13th March 1878.

The following accompany this report:—

One register of rainfall.
One abstract of irrigation (Form 9).
One old forms A, B, C.

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

LOWER DIVISION.

Report for the Month of March 1878.

THE canal was closed for irrigation on the 31st March. I hoped to keep the 10th Section open until the end of April, but the order to close the canal would allow of no exception.

2. There is a very considerable quantity of silt and rushes to be removed from the 10th Section, and my estimate (Rupees 7,953) for thoroughly cleaning it out to bed level will not be too much. Since this section of the canal was first thrown open no silt has been removed from between Pankal Vunka aqueduct, mile 183 chains 49, and the end of mile 188 chains 56. The portion between the head-sluice, mile 186 chains 56, and Pankal Vunka, mile 183 chains 49, has been cleaned out about every two years. As the canal will be opened for navigation purposes next season it will be necessary to bottom out the entire length, especially as the silt has accumulated to such a depth that water cannot be properly regulated to require heights at the end of the canal. The silt serves a very go[illegible] purpose, when thrown at the back of banks, by considerably strengthening them.

3. The annual repairs have hardly [illegible]n commenced, but material is being collected and contracts signed for the heavy work.

4. I am using the utmost diligence [illegible] starting the navigation works: some of them have been marked out, and stone is being quarried for some of the works. I certainly hope to be in a position to admit water and the boats in July. Fortunately the locks—those I have examined on my way up the canal—are in excellent condition, notwithstanding that the large quantity of water for the irrigation has passed through the lock valves.

5. It will be of the utmost importance to open the canal early for navigation, as the importation of grain may be considerable and the ryots and Comties will endeavor to get up large quantities before the July rains. Cholum (*best*) of the interior is still selling at 9 measures per Rupee against the 14 measures of the year before the famine. Prices are still rising, and there is not the least doubt that they will rise still higher.

6. The Chief Engineer, accompanied by me, commenced an inspection of this division on the 11th March 1878, and decided upon sites for the new buildings at the same time he furnished me with their designs. The extension to the railway was inspected on the 27th March, but as yet I have not received instructions to commence this work.

7. The rainfall during the month has been almost *nil*. A shower fell at Yalloor (S.T.) on the 21st March, and as much as 0·45 inch was recorded; elsewhere there have been merely sprinklings. The weather has been very hot towards the latter end of the month; at times the temperature in-doors at Cuddapah reached as m[illegible] 100°.

8. I enclose my abstract of irrigation a[illegible] revenue up to date. The final one will be s[illegible] have been submitted, and the irrigation under the t[illegible] give below the estimate of irrigation and [illegible]xt month when all the C forms will [illegible] filled by the canal will have ceased.

Estimate of Irrigation and F[illegible] up to close of Canal.

Acres.	Particulars.	Amount.	Total.
	Cuddapah District.	Rs. A. P.	Rs. A. P.
14539·43	Crops up to date	48,279 11 4	...
	Second crops unrecorded and under tanks...	185 0 0	...
	Total ...		48,464 11 4
	Kurnool District.		
8424·29	Crops up to date	26,800 0 0	...
	Total ...		26,800 0 0
	Miscellaneous revenue	861 10 3	...
	Total ...		861 10 3
22963·72	Grand Total ...	...	76,126 5 7

9. It is to be regretted that the water sent into the tanks for second crops has not been utilised by the ayacut holders. Fortunately this valuable water will not be lost, as the Board of Revenue have consented to the water being utilised for those second crops which were sown under the canal and which will need water now the canal is closed.

10. I met Mr. Allen Lindsay Lister, the Special Sub-Collector in charge of the Irrigation, on the 26th March at Cuddapah, and matters relative to the improvement in the ryots' position during settlements, and to the necessity of giving every ryot a chance to attend and learn *what he should pay*, were suggested by Mr. A. L. Lister and talked over. The arrangements and reforms which Mr. Lister intends to bring into operation next season will relieve the Engineers from a great deal of responsibility and anxiety, and the Overseers and Amins from a great deal illegitimate and hard work. The difficulty a body of men like the Canal Overseers and Amins—men without a particle of authority—have experienced in preventing abuse of water and in keeping the accounts can hardly be exaggerated, especially when the comparatively few complaints they have been instructed to make have been on the whole unsuccessful. Seemingly they will be relieved from this hereafter.

11. I am glad to state that the ryots of Chenoor (C.T.) have ceased to give the trouble they formerly did. They were in the habit of cutting the banks of the main channels and taking an inordinate supply of water, the results were considerable damage to the channels, a grievous loss of water, and some times a total stoppage of t[illegible] supply to Gurrimpad (C.T.), a village further down the channel. The Overseer reports that [illegible]e not had occasion to complain once this season of either wastage or damage.

12. It is a great pity so little indigo has bee[illegible]n. The ryots allowed nearly the whole of February to pass without ploughing, and seem[illegible]rmined not to sow just as those ryots under the tanks, struck as it were, against usin[illegible]al water discharged into the tanks. In March, however, ploughing and sowing were st[illegible]r commenced. It is very singular that so much time should have been lost, as indigo is [illegible] the most profitable crops.

13. I have tried the experiment of sowing i[illegible] in two separate fields in seperate villages, and although the crops were almost left to tak[illegible] of themselves, the highest prices were paid for labor, and the produce was sold at a gre[illegible]dvantage; the profit was almost exactly 100 per cent.

I give the details of expenditure as they m[illegible] interesting.

Outlay and Return upon One Acre of Indigo sown in a Level Field in Kokarayapilly (C.T.) in March 1876, and cut in July 1877. Irrigated by the Canal.

Times.	Particulars	Amount expended. Rs.	A.	P.	Profit. Rs.	A.	P.
In 1876-77.	Paid for land	4	8	0			
	Do. for sheep manure	3	0	0			
	Do. for ploughing and till ... four pairs of bullocks ...	2	0	0			
	Do. for indigo seeds	2	0	0			
	Do. for 12 coolies irrigatin ... weeding	2	4	0			
	Do. for 1½ months' water	1	8	0			
In 1877.	Do. for 6 coolies irrigating	1	8	0			
	Do. for 1 month's water ra	1	0	0			
	Total ...	17	12	0			
	Received for indigo crop stan.	...			34	0	0
	Net Profit ...	...			16	4	0

In the other case cholum was mixed with indigo; but although the cholum became blighted and an unusual outlay was expended upon levelling the field, a net profit of Rupees 60-2-10 was obtained from an outlay of Rupees 137-8-0. I believe the profit is equally great with paddy and raggy crops. I have tried the former crop, but have failed, as it is a crop that requires constant attention and careful irrigation; both of which the crop did not get.

14. I append a *nil* return of criminal cases, and also *nil* statement of village reticulation.

15. The health is universally good.

16. The staff were paid between 6th and 14th.

MULUVEEIPULLY,
7th April 1878.

(Signed) J. O. DUNPHY,
Divisional Engineer.

Rainfall for the Month of March 1878.

Date.	Yallcor. ms. 119 chs. 37.	Chintakunta. ms. 131 chs. 37.	Rajolly. ms. 13	Dhoor. ms. 161 chs. 45.	Beenapad. ms. 165 chs. 36.	Lock No. 1. ms. 174 chs. 62.	Adimayapally. ms. 180 chs. 56.
21st	0·45	...		...	...	...	...
31st	...	...	9	0·03	...	...	...

	1869.	1870.	1871.	1873.	1874.	1875.	1876.	1877.	1878.
Rainfall at Dhoor from 1st January to end of March	2·36	..	..	..	..	0·34	..	0·30	0·03

(Signed) J. O. DUNPHY,
Divisional Engineer.

Chief Engineer's report for March 1878.

On the 30th evening Mr. Latham, having given over charge to me, started for Bombay on his way to England on leave.

The work done has been principally the preparation for navigation.

In order to complete the estimates sanctioned on the 28th February last we have to put up—

101 Miles of telegraph.
60 Additional masonry weirs, &c., for locks are to be constructed.
5 Wharf walls amounting to 1,600 feet in length to be built up to 5 feet above bed level before water is let in.
29 Three-roomed lock-keeper's huts.
3 First-class passengers and parcels stations.
4 Second-class goods stations.
31 Post-houses.
1 Naw Engineer's bungalow, &c.
2 Apothecary's and Clerk's houses.
Entire refitting of lock-gates and machin
There are 35 single and 7 double locks i t in order.
A few lock gates in the 6th Section requ danking.

In addition to this there is the extension of canal to meet the railway at Cuddapah one mile five-eighths of new canal.

Two important culverts under the canal—

1 First-class bridge 40 feet span over the c.

5 Five-eighth miles of main canal betwee locks 1 and 2 of 6th Section have to be remodelled, a very heavy work.

Every endeavor will be made to get the work o far finished as to be ready for boats during the coming season in spite of the short time left and the difficulty in getting contractors and skilled workmen.

(Signed) C. H. WILKS,
Ag. Chief Engineer and Manager.

ABSTRACT of Irrigation recorded up to end of March 1878.

District.	Taluq.	Class of Irrigats. First Class.	Second Class.	Third Class.	Monthly.	Total.	Tanks supplied.	Estimated recorded Irrigation.	Remarks.
1	2	3	4	5	6	7	8	9	10
		ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	C. YDs.	ACRES.	
	Ramallcota ..	1,365·47	632·95	1,034·95	8·03	3,031·40	..	..	
	Nandikotakur ..	3,127·41	1,514·02	10,452·66	44·96	15,119·05	..	70·00	
	Nandial ..	2,527·11	819·39	2,714·40	38·00	6,198·99	..	1,124·00	
	Sirwell ..	2,253·48	857·39	2,921·34	6·62	6,128·83	*	..	* Chintakunta tank.
	Koilkoontla ..	279·23	238·17	2,170·94	21	2,710·55	..	..	
	Total ..	9,541·70	4,059·93	19,274·29	4	33,188·82	..	1,194·00	
	Jamalmadugu ..	39·69	83·31	546·36	4	792·00	..	..	
	Prodatore ..	2,620·24	1,550·77	1,112·32	50	7,305·93	†	135·76	† Cheypad, Pa. Jammaidkur,
	Cuddapah ..	2,471·88	1,086·64	954·63	3	6,422·33	‡	..	‡ Reddikuntah, Barrikuntah, Nagulabbar, Thoomalakunta,
	Total ..	5,131·81	3,020·72	2,613·36	7	14,518·26	..	135·76	Rechin tank, and Mittalore
	Grand Total ..	14,673·51	7,080·64	21,393·65	11	47,707·08	..	1,379·76	tank.

KURNOOL,
29th April 1878.

(Signed) C. H. WILKS,
Ag. Chief Engineer and Manager.

SUBMITTED for the information of Gover

It will be seen that the abstract of irrig or 1877-78 is—

	ACRES.
Recorded irrigation	47,707·08
Unrecorded do.	1,379·76
	49,086·84

The corresponding revenue is not stated in the report for the whole area, but for 22,963·72 acres in the Lower Division the revenue is estimated at Rs. 76,126-5-7.

2. In the report of the Lower Division some particulars are given of the results of experimental indigo and mixed cultivation. It is thought that advantage would result were something more undertaken in the same direction. Sugar-cane could be cultivated under some of the tanks on the line of the canal in the Upper Division. Ground-nut might perhaps succeed, and if so, it would be a very profitable and useful description of cultivation to introduce.

(Signed) JOHN MULLINS, Lt.-Col., R.E.,
Chief Engineer for Irrigation.

No. 90 ORDER THEREON 20th May 1878, No. 424 I.

ORDERED to be recorded.

(True Extract.)

(Signed) JOHN MULLINS, Lt.-Col., R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

(True Copy.)

Major, R.E.,
Under Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Chief Engineer and Manager, Madras Irrigation and Canal Company.
" Examiner Irrigation Company's Accounts.
" Revenue Department.
To Mr. A. L. Lister, on Special Duty.

Exd. T. D. Ryan.
Spare Copies

76

1434/1

Revenue 1878 Dept

No. 2448

IRRIGATION.

Govt. of [1878] Madras.

PUBLIC WORKS.

To

The CHIEF ENGINEER for IRRIGATION,

&c., &c., &c.

Dated May 30th.

Issued

Received 7th " Encl.

G. O. 2nd May 1878, No. 971 I

MAY.

Nos. 60-90

No. 1870.

Communicated

to the Board of Revenue

& &c

by Order

Madras Irrigation and Canal Company's
monthly report for May & 1878 forwarded.