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# MADRAS RECORD OFFICE

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## Government of Madras

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***Not to be folded or roughly handled***



No. 355. Read the following endorsement of the Chief Engineer for Irrigation, dated Camp at Ahtur, 28th October 1874, No. 38 :—

From J. H LATHAM, Esq., Chief Engineer and Manager of the Madras Irrigation and Canal Company, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Kurnool, 17th October 1874, No. 124.

*September Reports.*

I HAVE the honor to enclose copies of the Upper and Lower Sections Reports, together with my own, for the month of September 1874.

MADRAS IRRIGATION AND CANAL COMPANY.

UPPER SECTION. REPORT FOR SEPTEMBER 1874.

THIS September has been an unusually rainy month, and the total rainfall at the following stations is thus recorded :—

| | INCHES. |
|---|---|
| Soonkasala ... ... ... ... ... ... | 12·60 |
| Kurnool ... ... ... ... ... ... | 16·48 |
| Jupaud... ... ... ... ... ... ... | 16·52 |
| Velapanoor ... ... ... ... ... ... | 21·95 |

or an average of 16·88 in my sections.

2. At Kurnool there were seven days without rain, and the heaviest rain was 3·27 on the 23rd and 2·56 on the 24th.

3. At Jupaud there were five days without rain, and the heaviest rainfall was 2·20 on the 15th.

4. At Velapanoor there were three days without rain, and the heaviest rain was 2·70 on the 5th ; from the 2nd to the 5th inclusive there was 8·05, or an average of 2 inches per day for four days running.

5. As the country was rendered almost impassable all work was greatly hindered. It was almost impossible to make any measurements of fields, and even difficult to visit the villages. The work, therefore, of my staff has been considerably curtailed.

6. The heavy rains of the 23rd and 24th near Kurnool raised water to 7 feet in the canal. Several of the new lowered calingulahs discharged water on this occasion ; at No. 12, below Kurnool, there was a flow of 2 feet over the weir. It is certain that without these lowered calingulahs the canal would have been in great danger of breaching.

7. I am happy to be able to report that notwithstanding the height of water which was thus suddenly thrown into the canal, only one accident occurred, and that not from canal water.

8. At Ulloor there is an aqueduct over a stream which once or twice in the course of a year rises very suddenly. The stream approaches the aqueduct with great velocity, owing to the rapid fall just above the canal, and water occasionally rises to a dangerous height. This stream is kept out of the canal by stop banks, thoroughly revetted, but the force of the water, or perhaps the large stones carried down by the velocity, has a second time breached the lower top bank for about 40 feet at the junction with the aqueduct wing wall.

9. In 1870 a breach occurred at the same spot, which was very carefully made up ; but it is now proposed to build a wall in place of the bank, and to divert a portion of the stream into the canal, to be discharged by a calingulah in the lower bank into the vagoo below the aqueduct.

10. As soon as this breach was known the Overseer commenced a dam above the aqueduct, and a ring dam was formed round the breach so that water was scarcely stopped, and, owing to the heavy rains, the slight stoppage was of no importance.

11. Heavy and constant rains naturally deter the ryots from making applications, as the want of water is not felt by them. Hence the small number of acres applied for during the

month. There are great complaints of the loss of dry crops from the continuous wet; and garden crops have suffered severely. Even the rice has had more water than was required.

12. Up to the 8th October the total acreage applied for was as follows :—

| Taluq. | Up to September 8th. | Up to October 8th. | Increase in September. |
|---|---|---|---|
| Ramalacotta ... ... ... ... ... | 757·35 | 791·21 | 33·86 |
| Nundicotkur ... ... ... ... ... | 998·44 | 1,842·29 | 843·85 |
| Nundial (portion only) ... ... ... | 184·13 | 203·00 | 18·87 |
| | | | 896·58 |

13. A fine dry October is likely to follow and an increase of irrigation. As yet seven villages in Nundicotkur taluq and six in Nundial have sent in no application, although it is well known that they will require water for rice and garden crops hereafter.

14. During the month the preparation of the Budget Estimate, and also the village plans for the final boundary of the Company's land both for main canal and channels, has taken up much of the time of the office staff.

15. The Overseers at Jupaud and Velapanoor were both reported sick for a few days.

16. The payments to the staff were made from the 5th to the 14th, pre-audited on the 5th.

17. In consequence of several accidents to the high road to Nundicotkur it was impossible to get bandies to go to Ulloor with tools* and other necessaries, and as the canal is quite without a boat of any use some delay occurred at Ulloor breach.

* They were eventually carried by coolies.

18. I may add that a small sum sanctioned for a boat for the use of the Conservancy Engineer and for transporting tools and materials in emergent cases might be of great service, and would certainly save much bandy hire to the Company.

19. The Rain Register for September and the detailed abstract of Irrigation Applications are enclosed.

KURNOOL,
*9th October* 1874.

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

*Abstract of Applications received up to 8th October* 1874.

| | Applications received from 8th September to 8th October 1874. | | | | | | | Total up to 8th Sept. 1874. | Grand Total up to 8th Oct. 1874. |
|---|---|---|---|---|---|---|---|---|---|
| | At Rs. 6. | At Rs. 5. | At Rs. 4. | At Rs. 3. | At Rs. 2. | Special. | Total. | | |
| *Ramalacotta Taluq.* | | | | | | | | | |
| Soonkasala ... ... | ... | ... | ... | ... | ... | ... | ... | 12·83 | 12·83 |
| Kontalapaud ... ... | ... | ... | ... | ... | ... | ... | ... | 3 81 | 3·81 |
| Yedaroor ... ... | 0·20 | ... | ... | ... | ... | ... | 0·20 | 58 78 | 58·78 |
| Gopala Singavaram ... | ... | ... | ... | ... | ... | ... | ... | 51·36 | 51·36 |
| Nidjoor ... ... | 5·21 | ... | ... | 1·18 | ... | ... | 6·39 | 86·15 | 92 54 |
| Moongalapaud ... | ... | ... | ... | ... | ... | ... | ... | 62·73 | 62·73 |
| Mamidjalpaud ... | 1 03 | ... | ... | 1·26 | ... | ... | 2·29 | 56·74 | 59·03 |
| Roza ... ... ... | .. | ... | ... | ... | ... | ... | ... | 10·29 | 10 29 |
| Kurnool ... ... | 7·71 | ... | ... | ... | ... | ... | 7·71 | ... | 7·71 |
| Kulloor ... ... | 11 87 | ... | 2·02 | 3·38 | ... | ... | 17·27 | 338·17 | 355 44 |
| Zoharapooram ... | ... | ... | ... | ... | ... | ... | ... | 76·49 | 76·49 |
| | 26·02 | ... | 2·02 | 5·82 | ... | ... | 33·86 | 757·35 | 791·21 |



*Abstract of Applications received up to 8th October* 1874.—(Concluded.)

| | Applications received from 8th September to 8th October 1874. | | | | | | | Total up to 8th Sept. 1874. | Grand Total up to 8th Oct. 1874. |
|---|---|---|---|---|---|---|---|---|---|
| | At Rs. 6. | At Rs. 5. | At Rs. 4. | At Rs. 3. | At Rs. 2. | Special. | Total. | | |
| *Nundicotkur Taluq.* | | | | | | | | | |
| Rudravarum ... ... | 1·46 | ... | ... | 1·0 | ... | ... | 2·46 | 41·54 | 44·00 |
| Poodoor ... ... | ... | ... | ... | ... | ... | ... | ... | 15·75 | 15·75 |
| Ulloor ... ... | 17 65 | ... | ... | 1·32 | ... | ... | 18·97 | 16·54 | 35·51 |
| Satanicota ... ... | ... | ... | ... | ... | ... | ... | ... | 45·61 | 45·61 |
| Mallyala ... ... | ... | ... | ... | ... | ... | ... | ... | 39·20 | 39·20 |
| Muddigutla ... ... | 29·09 | ... | ... | ... | ... | ... | 29·09 | ... | 29·09 |
| Nagatoor ... ... | 3·51 | ... | 15·76 | ... | ... | ... | 19·27 | 18·76 | 38·03 |
| Moorvaconda ... ... | ... | ... | ... | ... | ... | ... | ... | 51·64 | 51·64 |
| Veerapoorum ... ... | 5·44 | ... | ... | ... | ... | ... | 5·44 | 37·51 | 42·95 |
| Moochoomurry ... | 29 59 | ... | ... | ... | ... | ... | 29·59 | 196·05 | 225·64 |
| Beeravole ... ... | 6·88 | ... | 1·38 | ... | ... | ... | 8·26 | 48·35 | 56·61 |
| Pratakota ... ... | 43·20 | ... | 6 47 | ... | ... | ... | 49 67 | ... | 49·67 |
| Puggydial ... ... | 46·71 | ... | 0·57 | ... | ... | ... | 47·28 | 40·42 | 87·70 |
| Ganapavarum ... ... | 217·80 | ... | 0·67 | ... | ... | ... | 218·47 | ... | 218·47 |
| Thautipaud ... ... | ... | ... | ... | ... | ... | ... | ... | 32·39 | 32·39 |
| Bollovarum ... ... | ... | ... | ... | ... | ... | ... | ... | 27·26 | 27·26 |
| Terrigopully ... ... | 10·37 | ... | ... | ... | ... | ... | 10 37 | ... | 10·37 |
| Bunnoo ... ... | ... | ... | ... | ... | ... | ... | ... | 14·59 | 14·59 |
| Jutoor ... ... | 70·62 | ... | ... | 39·96 | ... | ... | 110·58 | 28·72 | 139·30 |
| Chelimela Rudravarum. | 101·98 | ... | ... | 135·55 | ... | ... | 237·53 | ... | 237·53 |
| Pamulpaud ... ... | ... | ... | ... | ... | ... | ... | ... | 250·77 | 250·77 |
| Tudicherla... ... ... | 1·93 | ... | 14·37 | 10·78 | ... | ... | 27·08 | ... | 27·08 |
| Regadigoodoor ... | ... | ... | ... | ... | ... | ... | ... | 47·73 | 47·73 |
| Velapanoor ... ... | ... | ... | ... | ... | ... | ... | ... | 45·61 | 45·61 |
| Korrapole ... ... | ... | ... | ... | 6·65 | ... | ... | 6·65 | ... | 6·65 |
| Banakacherla ... ... | 2·17 | ... | ... | 20·97 | ... | ... | 23·14 | ... | 23·14 |
| | 588·40 | ... | 39·22 | 216·23 | ... | ... | 843·85 | 998·44 | 1,842·29 |
| *Nundial Taluq.* | | | | | | | | | |
| Bilculgoodoor ... ... | ... | ... | 3·28 | ... | 5·99 | ... | 9·27 | 38·16 | 47 43 |
| Pessaravoy ... ... | ... | ... | ... | ... | ... | ... | ... | 46·15 | 46·15 |
| Karemadula ... ... | ... | .. | ... | 9 60 | ... | ... | 9·60 | 30·22 | 39·82 |
| Permatoor ... ... | ... | ... | ... | ... | ... | ... | ... | 19·61 | 19 61 |
| Koratamuddi ... ... | ... | ... | ... | ... | ... | ... | ... | 0·84 | 0·84 |
| Kakanoor ... ... | ... | ... | ... | ... | ... | ... | ... | 11·09 | 11·09 |
| Yerragoontla ... ... | ... | ... | ... | ... | ... | ... | ... | 20·23 | 20·23 |
| Bojanum ... ... | ... | ... | ... | ... | ... | ... | ... | 12 44 | 12·44 |
| Tirripaud ... ... | ... | ... | ... | ... | ... | ... | ... | 3·19 | 3·19 |
| Boojanoor ... ... | ... | ... | ... | ... | ... | ... | ... | 2 20 | 2·20 |
| | ... | ... | 3·28 | 9·60 | 5·99 | ... | 18·87 | 184·13 | 203·00 |
| Grand Total... | 614·42 | ... | 44·52 | 231·65 | 5·99 | ... | 896·58 | 1,939·92 | 2,836·50 |

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

LOWER SECTIONS. REPORT FOR THE MONTH OF SEPTEMBER 1874.

MAIN CANAL.

DURING this month 28·14 inches of rain fell during twenty-seven days, being on the average more than an inch a day, and during the nights of the 15th and 16th 11·08 inches fell. The result of so heavy a rainfall was a succession of floods all over the country, which on several

occasions much endangered the safety of the canal works; but it was in no case the natural drainage of the country above the canal which gave cause for any alarm, but the waters accumulated in Government and private tanks, which having been filled far more rapidly than their calingulahs and sluices could discharge, the water, in many cases breached, and in some cases were cut to prevent their breaching.

2. Near Jutoor the tanks which by their banks being cut caused a breach into the canal in July, from the same cause broke through the eastern bank of the canal again close to the former breach, but not much damage was done. At Ayaloor the tanks have again, for the *fourth* time this season flooded the bungalow and compound and for fifteen days it remained two feet under water.

3. The large amount of water thus forced into the canal nearly overpowered the calingulahs and proved the necessity of the Calingulah No. 9-A being built next season; also calingulahs to each of the locks in the 8th Section not yet provided with them.

4. On the night of the 23rd a fall of 1·77 inches brought such a volume of water into four large tanks near the hills in Sirwell Taluq, that they, having by the previous rains been filled nearly to the top of their banks, could no longer stand the pressure and gave way one after the other; their combined waters flowed into the river Vaikalair which passes under our canal by an aqueduct of 11 spans of 30 feet each, but this water-way proved far from sufficient to carry away so rapid a flood, and the waters backed up until they rose 6 feet 6 inches above the crown of the aqueduct arches and spread out full half a mile on either side of its banks. The masonry work stood the pressure well, and no damage was done to it; but when the flood began to subside the scour of the water through the last arches, cut away the slopes of the embankment on either side to such an extent that the whole of the wing walls were exposed, and the tow-path slipping forward left only 1 foot of earth to retain the canal water (then 2 feet deep) from flowing out of its channel; had it done so most serious breaches must have resulted.

5. By the 26th the flood had subsided sufficiently for the repairs to be commenced, and by this time all has been made safe again.

6. In the 154th mile two small breaches occurred, one caused by a backwater bursting into the canal, and the other from a leak in soft soil, which overpowered the bankers, and ended in a breach on the upper or eastern side, about 40 feet wide; a ring dam was quickly thrown across the latter breach so that water continued to flow down the canal and both have been now thoroughly repaired. Just above Jillali bridge, in the 158th mile, another small breach was caused by the land waters accumulating above the canal until they ran over into it; this is now being repaired.

7. The Government tank in the hills above Dhoor has lately had its calingulah lowered; a leak also opened in its bank, but the result was a flood down the valley, which backed up at Dhoor aqueduct, where it passes under our canal, until it rose 4 feet above the crown of the arches.

8. A tank in the hills above Chintacoonta having given way a flood rushed under Bainapully and Peechapaud Aqueducts, rising 3 feet above the crown of their arches.

9. The Pennair river has been in flood all the month, rising on the 15th and 22nd when at its maximum to 7 feet above the crown of anicut, but as far as can yet be seen the anicut and head works have received no damage.

10. In the 10th Section the country to the *west* of the canal was flooded right up to the Bellary road for a distance of three miles, two tanks near the Madras Railway having given way and the culverts provided under the canal for the ordinary drainage not being sufficient to carry off such a sudden accumulation of waters, three small breaches occurred in the 187th and 188th miles, but they are now repaired, and no interruption of irrigation has resulted.

DISTRIBUTION WORKS.

11. As the flood [illegible] spread more or less all over the line of country between the canal and the river, [illegible] flood in the 7th, 8th, and 9th Sections, considerable injury to our distribution channels was caused. I have not yet received full reports as to the details of these injuries, [illegible] bridges for village roads over channels having been undermined and washed away, [illegible] of minor channels have been filled with silt, and others breached, but I believe that [illegible] has been repaired, and the bridges will be rebuilt as soon as

*Proceedings of the Madras Government, Public Works Department,*
*20th November* 1874.

possible; no interruption to irrigation has occurred likely to injure the paddy crops, though of course the ryots grumble as usual.

12. In the 8th Section the Gotaloor channel was just commenced before the rains came, and its progress was stopped until the 29th, but I hope to have water down it this week. In the 10th Section also the Goorumpaud new channel has in a similar way been interrupted; it is now resumed, but it will, I fear, be some weeks before the masonry works can be completed. The new Cockroyapully channel was finished just before the rains began.

IRRIGATION.

13. The early rains have deprived us of all the usual floodings to indigo and corra, but the spread of wet cultivation is, I think, satisfactory. All the tanks are full, so we shall not be called on to supplement any of them with canal water for the first crops, but for Nundial tank I think we may be required to give a few months supply for the second crop.

14. The following table shows the amount of the applications received from ryots in the 7th, 8th, and 9th Sections, also the estimated amount actually sown in the 10th Section; but owing to the continued absence of all the Curnums from their villages, my Overseer in that station and his Amins have not been able to get in a single application, but they have measured up many fields as possible of those taking water for the first time, and others they know the area of from the returns of last season.

| Taluqs. | Acres. | | Remarks. |
|---|---|---|---|
| | Acres. | Decl. | |
| Nundial ... ... ... ... ... ... ... | 190 | 51 | |
| Sirwell ... ... ... ... ... ... ... | 658 | 24 | |
| Koilkuntla ... ... ... ... ... ... | 205 | 82 | |
| Jummalmudugu ... ... ... ... ... ... | 30 | 20 | |
| Prodatoor ... ... ... ... ... ... ... | 1,536 | 58 | |
| Cuddapah ... ... ... ... ... ... ... | 2,180 | ... | |
| Total to end of September ... | 4,801 | 35 | 1st crop paddy. |

15. Owing to the state of the village roads and of the rivers during September nearly all communication with the Curnums has been cut off, and many applications have yet to come in from them in the Kurnool District. On the whole, I think, we may reasonably expect 50 per cent. increase on the above areas for first crop, which would raise the total to 7,202 acres, which, as compared with the total first crops of last season which amounted (omitting tanks) to 4,710·50 acres, shows a probable increase of slightly over 50 per cent. on the whole area of first crop wet cultivation.

16. It is too soon yet to calculate the probable amount of second crops we may irrigate, and I shall not attempt to do so. All the crops of paddy in these Lower Sections look well, and will, I hope, produce an amount of grain above the average.

GENERAL.

17. I wish, in conclusion, to state my belief that nearly all the injuries to main canal enumerated above have been due to the bursting, or intentional breaching, of Government tanks above the canal. Every culvert, aqueduct, and calingulah in these sections has been severely tested, and it is certainly very satisfactory to find that they have all stood these sudden floods without any injury as far as we can yet certify, for it remains to be seen whether some of their foundations are not injured; and in the case of the Vaikalair aqueduct the danger was for some hours certainly very serious. I am convinced that the masonry works on these sections of the canal are capable of discharging without any danger to their construction all the drainage water of the water-shed above the canal *as it falls*, but when tanks which for weeks have been accumulating the drainage of many square miles suddenly give way and precipitate into the already flooded nullahs and rivers the stored up rainfall of weeks, it is putting our masonry and earthworks to a test they were never calculated to sustain, and which is therefore dangerously trying to their stability.

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

CHIEF ENGINEER'S REPORT TO ACCOMPANY THE DIVISIONAL REPORTS FOR SEPTEMBER 1874.

1. During only three months since the rain has been registered, *i.e.*, since 1862 inclusive, has as much as 10 inches of rain fallen at Kurnool; viz., in September 1862, 13·77; in August 1870, 13·43; and in the present September, 16·48 inches of rain fell at Kurnool. September this year has therefore been far the wettest month recorded.

At midnight on the 7th the river Toombudra rose to 19·40 feet on our gauge, and continued at that height for no less than six hours. The only other freshes recorded as having risen as high as 16 feet were 16·00 feet on 21st July 1864, 16·00 on 2nd October 1866, 16·50 on 11th September 1868. During the whole night of the 7th, 6·8 feet of water were pouring over the crest of Soonkasala Anicut, having a clear overfall. This was nearly 9 inches less on the crest than had previously occurred with a less fresh, thus showing that the silting up of the river bed above the anicut, to a level probably averaging that of the crest, causes a very sensible velocity of approach of the stream to the anicut.

2. The vast amount of rain put the defensive power of the canal to that sort of test, which few railways or roads in this country have stood without some temporary interruption. No accident is reported to the lower side bank of the canal. At Ulloor a stream passes under an aqueduct, to which it is directed by guiding banks or "return bunds." The flood water of this stream overflowed its banks at Waddaman about 1½ miles above the aqueduct, and, joining a stream from Nundikcotkur, caused that to overflow into the canal in rear of the return bunds Some scour was set up which breached the return bund; and a face-wall will immediately be built instead of it, the contractor for which has already got the foundation nearly out. Meantime irrigation is not interfered with.

In the 7th Section the process described in my report for July was repeated. For a fourth time the Ayaloor station has been flooded by water from the Vaikalair river basin which seems to be artificially brought into the Ayaloor tanks, but so clumsily that the Reddi is over-done with his own water-supply, and his tank breached by his own water-works, or at least those of his fathers. The discharge then takes a course across country in the valley of the Caulee or Koond, and floods the Company's station.

An accident by which four large tanks were breached into the Vaikalair obliged the aqueduct over that river to pass in a few hours water for the passage of which nature, if left alone, would have allowed a week more. The aqueduct stood well, but the earth slopes require revetting in order to stand well the current caused by so dangerous an inundation.

Several small breaches into the canal are reported in the 9th and 10th Sections; this shows that the banks were too low, or the catchwater drain, on the upper side of canal, not sufficiently clear. The canal should not be liable to such accidents, and the necessary improvements will in due time be carried out.

The following applications for water for irrigation have been received:—

*15th October* 1874, *Central Office.*

| Division. | Taluq. | Rupees 6. | Rupees 5. | Rupees 4. | Rupees 3. | Rupees 2. | Special. | Total for 1874. | Total for 1873. | Increase. | Decrease. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ACRES | ACRES. | ACRES. | ACRES. | ACRES. | ACRES. | ACRES. | ACRES. | ACRES. | ACRES. |
| Upper Division. | Ramalacotta ... | 568·20 | ... | 113·03 | 113·73 | ... | ... | 794·96 | 913·33 | ... | 118·37 |
| | Nundicotkur ... | 1,374·45 | ... | 87·82 | 387 81 | ... | ... | 1,850·08 | 2,475· | ... | 624·92 |
| | Nundial Upper Division. | ... | 7·15 | 52·55 | 137·31 | 5 99 | ... | 203·00 | 89· | 114·00 | ... |
| Lower Division. | Nundial Lower Division. | 155·56 | ... | 2·43 | 37·70 | ... | ... | 195·69 | 186· | 9·69 | ... |
| | Sirwell ... ... | 330·61 | 14·82 | 59·28 | 265·07 | ... | ... | 668·78 | 1,055· | ... | 386·22 |
| | Koilkuntla... ... | 156·16 | ... | 0·68 | 28·59 | 6·95 | ... | 192·38 | 272· | ... | 79·62 |
| | Jummalmudugu ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Prodatur... ... | 94·40 | 140·81 | 328·32 | 772·64 | ... | ... | 1,336·37 | 647· | 689·37 | ... |
| | Cuddapah... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Total... | 2,679·38 | 162·78 | 643·11 | 1,743·05 | 12·94 | ... | 5,241·26 | 5,637·33 | 813·06 | 1,209·13 |
| | | | | | | | | | Difference decrease... | | 396·07 |

*Proceedings of the Madras Government, Public Works Department, 20th November* 1874.

The result of the Deputy Collector's efforts in Nundial Taluq now begins to show itself in an increase of 123·69 acres of irrigation applied for. He has not yet been so successful in Sirwell, where the applications are for 386·22 acres less than this time last year. The system in practice is as follows:—In the Kurnool District the applications are made direct to the village Curnums according to the new rules, and the Company's Officers are sufficient only to supply water, and to check the correctness of the Curnums' returns of water-rate due. In every taluq in this district, except Nundial (as above), there is a falling off of applications as compared with last year, the total decrease being 1,209·13 acres. In Cuddapah Taluq the old rules of application are still in force, but the Company has a staff sufficient only for supplying water and checking the extent of irrigation, and not for dividing and measuring fields as fast as applicants desire, nor for taking their applications without any delays. Still, in Prodatur Taluq the applications taken exceed last year's by 689·37 acres, but in Cuddapah the Overseers' time has been much occupied by the settlement of last year, which by some misfortune has been very late this year in Cuddapah; and the Curnums also have been absent at the settlement at the Tahsildar's or Deputy Collector's Cutcherry, and, lastly, the village maps are not as yet published for the villages except for some on the north of the Pennar not hitherto irrigated, so that it is absolutely impossible for the Company's Officers to recognize any fields without the Curnum to inform them. In this taluq therefore no applications can have been made nor received, as was the case also last year.

Under all the circumstances, I cannot venture to guess the probable irrigation this season. Judging from Prodatur, in which taluq alone there has been a uniform system of application in both years, and in which the rains have been heaviest so that if they have had a discouraging effect anywhere it should be there, the increase of irrigation should be 100 per cent. on last year. Of course under the new rules the receipts would not therefore be also doubled.

I append a table of rain fall in September.

KURNOOL,
*16th October* 1874.

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

*Register of Rainfall in Inches and Decimals during the month of September* 1874, *at 6* A.M. *daily.*

| Month and date. | Soonkasala. | Kurnool. | Jupaud. | Velapanoor. | Jutoor. | Ayaloor. | Chintacoonta. | Rajoly. | Dhoor. | Adimapully. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1st Sept. 1874. | Nil. | 0·14 | Nil. | Nil. | 0 99 | | 0 40 | 1·05 | Nil. | Nil. | |
| 2nd " " | 0·20 | 0·09 | 0·70 | 1·75 | 0·80 | | 0·27 | 2·25 | 0·15 | ... | |
| 3rd " " | 1·80 | 1 55 | 2·00 | 1·90 | 1·75 | | 0·34 | 1·05 | 0·09 | 0·10 | |
| 4th " " | 0·00 | 0 84 | 0·80 | 1·70 | 1·27 | | 0 16 | 0·85 | 1·81 | 1·00 | |
| 5th " " | 0·30 | 0·29 | 1·56 | 2·70 | 1·28 | | 0·52 | 0·00 | 0·60 | 1·50 | |
| 6th " " | 0·00 | 0·25 | 0 05 | 0·00 | 0·80 | | 1·18 | 5·00 | 0·31 | 0·02 | |
| 7th " " | 0·20 | 0·17 | 0·25 | ... | 1·07 | | 0·16 | 1·40 | 0·40 | 1·00 | |
| 8th " " | 0·80 | {0·67 / 0·15} | 0·90 | 0·20 | Nil. | | 0·14 | Nil. | 0·17 | 0·20 | |
| 9th " " | 0·00 | 0·00 | 0·00 | 0·90 | 0·76 | | 0·14 | ... | 2·77 | 1·50 | |
| 10th " " | ... | ... | .. | 0·10 | 0·12 | | 0·21 | 0·25 | 0·00 | 5·30 | |
| 11th " " | 0·20 | 0·48 | 0.70 | 0 30 | Nil. | 7·60 | 0·11 | 0·15 | 0·04 | 0 00 | |
| 12th " " | 1·70 | 0 05 | 0·69 | 0·60 | 0·20 | | 0·16 | 0·00 | 0·52 | 0 07 | |
| 13th " " | 0·20 | 0·00 | 0·10 | 0·00 | Nil. | | 1·09 | ... | 0·03 | 0·10 | |
| 14th " " | 0·00 | ... | 0·45 | 1·70 | 0·30 | | 0·59 | ... | 0·76 | 1·10 | |
| 15th " " | 0·70 | 0·71 | 2·20 | 1·20 | 0·20 | | 0·52 | 3·85 | 4·73 | 1·00 | |
| 16th " " | 0·00 | 0·76 | 0·10 | 0·10 | 0·10 | | 0·48 | 7·00 | 6 34 | 0·80 | |
| 17th " " | 0·30 | 0·01 | 0·00 | 0·00 | Nil. | | 0·47 | 0·50 | 1.51 | 0·90 | |
| 18th " " | 0·10 | 2·13 | 1·20 | 0·60 | 0·10 | | 0·26 | 0·20 | 0·00 | 1·20 | |
| 19th " " | 0·00 | 0·00 | 0·00 | 0·10 | Nil. | | 0·61 | 0·00 | 1·25 | 1·00 | |
| 20th " " | 1·00 | 0·45 | 0·30 | 1 00 | 0·20 | | 0·77 | 0·35 | 0 21 | 3·25 | |
| 21st " " | 0·60 | {0·26 / 0·82} | 0·40 | 0·55 | 0·10 | | 0·56 | 0·70 | 0·72 | 1·20 | |
| 22nd " " | 0·10 | 0·34 | 0·50 | 0·15 | 0·94 | | 0·43 | 0·75 | 1·77 | 0·90 | |
| 23rd " " | 1·80 | 3·27 | 1·20 | 1·10 | 0·08 | *9·31 | 0·55 | 0 05 | 0·11 | 0·53 | |
| 24th " " | 1·00 | 2·56 | 0·85 | 0·95 | 1·60 | 5·40 | 0·21 | 0·70 | 2·69 | 0 20 | |
| 25th " " | 1·00 | 0·14 | 0·40 | 0·35 | 0·18 | Nil. | 0 14 | 0·10 | 0·15 | 1·00 | |
| 26th " " | 0·00 | 0·01 | 0·30 | 0·15 | 0·22 | ... | 0·32 | 0·16 | 0·05 | 0·00 | |
| 27th " " | ... | 0·03 | 0·32 | 0·60 | 0·22 | 4·40 | 0·29 | 0·00 | 0·15 | ... | |
| 28th " " | ... | 0·00 | 0·00 | 1·10 | 0·17 | 2·12 | Nil. | ... | 0·05 | ... | |
| 29th " " | 0·40 | 0·31 | 0·28 | 1·40 | 0·50 | Nil. | 0·30 | 0·30 | 0·53 | ... | |
| 30th " " | 0·20 | 0·00 | 0·17 | 0·95 | 2·13 | 1 35 | 0·00 | 0·00 | 0·24 | 0·20 | |
| Total... | 12·60 | 16·48 | 16·52 | 21·95 | 16·08 | 30·13 | 11·75 | 26·66 | 28·14 | 24·07 | |

* Mr. Dumphy reports the return of Cross big gauge at Ayaloor during his absence is "not reliable."

KURNOOL,
*15th October* 1874.

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

*Proceedings of the Madras Government, Public Works Department,*
*20th November* 1874.

SUBMITTED for the information of Government.

The information as yet available regarding the area of irrigation for this season under the Company's canal indicates that in the Kurnool District no considerable extension of irrigation is probable this year, but in Cuddapah a satisfactory increase may be anticipated.

2. The heavy rainfall in the country traversed by the canal led to the breaching of many tanks above it, and to an undue and severe trial of the stability of the masonry works, a test which they have stood well. The attention of the District Engineer, Kurnool, has already been called to the state of many of the tanks in the Nundial taluq, and he and the District Engineer, Cuddapah, should provide for the complete safety of all the tanks above the canal as early as may be practicable. Here as elsewhere what is wanted is adequate means of disposing of surplus water, and this first essential should be attended to without delay. By this time next year all the tanks which have suffered this year should, at least in this respect, have had their requirements met.

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

No. 356. ORDER THEREON, 20th November 1874, No. 3,286.

IRRIGATION, No. 40.

THESE Proceedings will be communicated to the District Engineers of Kurnool and Cuddapah, who will give their early personal attention to the tanks and other irrigation works, which affect the security of the Madras Irrigation and Canal Company's canal, and arrange for the addition of such means of discharging surplus water as will obviate all risk of breaches for the future. The District Engineer, Kurnool, will also report what has been done towards providing for the future safety of the tanks near Nundial and in the southern part of that district which suffered in July last.

(True Extract.)

Colonel, R.E.,
*Secretary to Government.*

To the Chief Engineer for Irrigation.
" Chief Engineer and Manager of the Madras Irrigation and Canal Company.
" District Engineer, Kurnool.
" " Cuddapah.
" Revenue Department.

Exd. S. T. Austin.

Spare Copies

Enclosures. 4

No. 38 Dt. 24

Submitted for the information of Government.

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had their requirements met.

Camp at
Ahtur
28th October 1874.

I have &c
L Holkk.
Chief Engineer for Irrigation

To
The Secretary to Govt. P.W.D.

P. W. Department
Diary for 1874
No. 38 Rs. 6963

From
The Chief Engineer for Irrigation
To The Secretary to Government
P.W.D.

Dated 28th October
Received 6th Nov. } 1874

Enclosures 4

Ll. No: 3286. 28-11-74.
Submits with remarks the Report of the Chief Engineer & Managers M. I. & C. Co. on the Upper & Lower Sections of the Company's Canal for the Month of September 1874.—

Ap 358

Proceedings of the Madras Government
Read the following.—
From the Chief Engr for Irrigation — Dated No. 38 - of 28th Oct 74

These Proceedings will be communicated to the District Engineers of Kurnool and Cuddapah, who will give their early personal attention to the tanks, and other irrigation works which affect the security of the Madras Irrigation & Canal Company's Canal, and arrange for the adoption of such means of discharging sur-

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W. 25/10/24.

355-356.

To
The Chf Engr for Irrn
— do — Finance
Mr. I. H. Co
— Dr Kurnool
— D.C. Cuddapah
— Revr Dept
signed & copies despd 24/11/24

6963

Govt. of 1874 Madras.

PUBLIC WORKS.

To

The Chief Engrs
for Irrigation

Dated

Recd. Encl. 4

G. O. 20 Nov 1874, No. 3786

Nos. 355-356.

Madras Irrigation and Canal Company - The proceedings passed on the Report submitted by the Chief Engr. for Irrigation on the Upper and Lower sections of the Company's Canal for Septr. 1874, Comd. to the Dist Engrs of Kurnool and Cuddapah with certain instructions -