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GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No. 6378
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Dated 19. 11. 1877

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

10th November 1877, No. 477 I.

Irrigation.

Read the following paper :—

No. 34. Endorsement of the Chief Engineer for Irrigation, dated Camp at Palcode, 29th October 1877, No. 223 I.

From Major H. R. MEAD, R.E., District Engineer, South Arcot, to the Chief Engineer for Irrigation, dated Cuddalore, 13th October 1877, No. 150.

I HAVE the honor to report that there have been heavy floods in the Pooniar and Vellaur rivers and also very heavy rain in Virdachellam Taluq that has caused damage to works, the full details of which I am unable to report at present.

The following are the heights on three of the anicuts :—

Month.	Date.	On Crest of Pooniar Anicut.		Pelanthorai Anicut.		Vellaur Anicut at Shatiatope.	
		FT.	IN.	FT.	IN.	FT.	IN.
September 1877	13th	2	0	1	7	0	7
Do.	14th	2	6	0	8	1	6
Do.	15th	1	6	0	9	0	6
Do.	16th	2	6	0	10	1	3
Do.	17th	3	6	0	6	1	0
Do.	18th	2	0	2	10	3	6
Do.	19th	2	3	2	0	2	6
Do.	20th	2	0	0	10	1	0
Do.	21st	1	9	2	9	2	3
Do.	22nd	3	0	1	3	1	6
Do.	23rd	2	0	0	6	0	9
Do.	24th	4	6	6	6	8	9
Do.	25th	2	0	1	9	5	6
Do.	26th	1	6	1	0	1	6
Do.	27th	0	10½	0	9	1	0
Do.	28th	1	0	0	7	1	6
Do.	29th	1	9	2	9	0	6
Do.	30th	1	10½	2	6	2	6
October 1877	5th	...		...		5	3

In 1874 the height on the Pooniar anic crest was 5·77 feet, the highest flood since it was built in 1862 being then 3 feet. t Pelanthorai the flood is, I believe, the highest on record. I am not aware of the hei t of the maximum flood at Shatiatope, but the highest in the last five years was 6½ t on crest.

2. No damage of any sort has been reported as having occurred to the Pooniar anicut, but owing to the open heads in the Pooniar river damage has occurred.

The water came in heavy flood down the Allangal channel; it has breached Trunk Road No. VIII, but not badly; the Allangal channel banks are breached in many places and a large hole scooped out in rear of the bridge on the trunk road and the northern portion of the first dam has been seriously cracked and will have to be rebuilt.

I consider it is useless to attempt to do much to this channel until it is head-sluiced.

3. West of the rail-road bridge across the Pooniar a breach occurred in the south bank owing to an open head to a channel; this channel must be head-sluiced at once, and I request your leave to do it irrespective of the whole of the banks of this section being taken up.

On the north-side the Malattaur was very full and there were some small breaches; the Trunk Road No. IX was breached in two places by the Pooniar water coming across where the river is not banked. Much damage has been done to the channels from the Pooniar that are not head-sluiced and of course many injured by the spill passing over them where the river is not banked.

4. The Assistant Engineer in charge has inspected Pelanthorai and Shatiatope anicuts; he was, owing to floods, unable to report fully regarding them, but he believes Pelanthorai anicut cut-stone apron is all in good order, but the rough stone in rear has sunk considerably in many places.

Shatiatope anicut I fear has been seriously injured, and heavy repairs will be needed; there are, as you are aware, three aprons—the first cut-stone, the second laterite in chunam, the third loose laterite; the third apron has sunk in many places, and the second in two places between the sand sluices opposite the second and third arches from the south; as far as can be judged, eight and five yards in length respectively have gone.

5. In Virdachellam twenty tanks have been breached, and I regret much that Vylore new tank is one of them; the others are minor tanks.

Vylore tank was completed last year, but from the depth of water that flowed over the calingulah during heavy rain, I suspected that the drainage area estimated as four square miles was incorrect, and therefore this year I ordered a temporary by-wash 35 yards in length to be made. West of the calingulah I inspected the tank last on the 21st July 1877, and found it in good order, the by-wash made and the grass that had been planted growing much better than I had hoped. I ordered the tanks above to be sketched in, and the drainage area was found to be 24 square miles in the place of four and was arranging for estimates to be sent in for a new calingulah and for a bank to prevent the surplus from the calingulah washing down the foot of the tank-bund and across the cultivated land.

The tank breached with —* feet on the calingulah (nothing excessive), and I cannot but attribute the breach to a crack in the new earthen bank and believe that attention on the part of the villagers would have saved it.

I cannot hope to close the breach —* yards in length this season in time to save the cultivation, and therefore propose having the bund-planting carefully attended to and extended and forwarding an estimate for a new calingulah, the bank referred to above and closing the breach; this work may be done next season.

SUBMITTED for the information of Government.

2. The District Engineer should lose no time in ascertaining and marking on the wing walls of the Shatiatope anicut across the Vellaur the maximum flood level.

* Will follow [illegible] officer's report list.—H.R.M.

According to information given to the undersigned in 1874, the maximum was 13 feet (1871) above the crest. Without a knowledge of this level neither the proper height of wings nor that of flood-banks in connection with irrigation works can be determined, and as attention was specially called in the Inspection Notes of 1874 to the necessity of raising wings and flood-banks well above flood level, while in memorandum No. 6 S.A., paragraphs 1—6, it was directed that "flood levels should be neatly and carefully marked on all works at which these levels have been ascertained," it is unsatisfactory to find that in any important irrigation works in the district this information should still remain unrecorded.

Proceedings of Madras Government, 5th November 1874, No. 3,143.

10th March 1876.

3. With regard also to this Shatiatope anicut, it was shown by the remarks made in the Inspection Notes, paragraph 53,—

1*st*—that the anicut aprons were considerably out of order;

2*nd*—that some of the damage sustained was the result of sets caused by the indifferent approach to the anicut from above, and that this approach needed certain improvements.

The District Engineer should report what has been done since that inspection was made and with what results.

4. The present state of the Pooniar and its affluents must necessarily lead to more or less damage whenever there may be a considerable fresh in the river. It is to be regretted that the investigations necessary to enable the treatment of this river to be properly determined have not yet been completed. The information required was outlined in this office memorandum, No. 3 S.A., of the 7th March 1876, after an inspection (*vide* Proceedings of the Madras Government, 21st February 1877, No. 577.) There have been difficulties in the way of carrying on the investigation owing to the officers employed upon it having been transferred to other work, but it is understood that they are being proceeded with, and the question of the advisability of taking up the second section from the Trikalore anicut to a little below the rejunction of the Korayar and Pooniar has recently been under consideration and is awaiting further information. The District Engineer should report what has been done in Section No. 1 above the anicut, and in the way of nanul-planting elsewhere.

G.O., No. 429 I, dated 19th October 1877.

5. The breaching of the Vylore tank requires to be more fully reported on. The mismanagement in the first instance was noticed in paragraph 26 of the Notes of Inspection of 1874, and certain punishments were inflicted (G.O., No. 1,108, of the 19th April 1875). If, as appears probable, the tank filled for the first time during the recent rains, it was the duty of the Range Officer to have it carefully watched and to provide as far as possible for its safety, and as it is only a few miles from Virdachellum, the headquarters of the range, this might, without difficulty, have been arranged for. It appears that the water rose to no excessive level, and the District Engineer considers that attention on the part of the villagers might have saved it, but what was necessary was attention on the part of the Range Officer and the Subordinate more particularly in charge. Moreover, if the catchment basin of the tank be, as the District Engineer supposes, 24 square miles instead of 4 square miles as reported when the estimate was originally sanctioned, the temporary by-wash of 35 yards formed under the District Engineer's orders would be altogether inadequate. It will be seen, from the Proceedings of the Madras Government just referred to, that the subject of the area of the catchment basin was specially inquired in in 1869, and it was then stated that its boundaries had been measured.

District Engineers, paragraph 5.

Proceedings of Madras Government, 27th May 1869, No. 1,733.

6. The construction of sluices at the heads of open irrigation channels from the Pooniar may, it is considered, be undertaken if—

1*st*—the line of the proposed embankments has been fixed,
2*nd*—the ground level is sufficiently high to obviate risk of the sluices being turned and destroyed,
3*rd*—maximum flood level has been ascertained.

Possibly, pending the construction of embankments or supposing the scheme of embanking is abandoned, the safety of these sluices could be secured by constructing in connection with them embankments on the proper alignment for a distance of 150 feet up and down stream, then sloping down these banks to ground-level at 1 in 15, and revetting the slopes up to M.F.L.

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

To the Joint Secretary to Government, Public Works Department, Irrigation Branch.

No. 34-A. Endorsement of the Chief Engineer for Irrigation, dated 1st November 1877, No. 225 I.

From Major H. R. MEAD, R.E., District Engineer, South Arcot, to the Chief Engineer for Irrigation, dated Cuddalore, 24th October 1877, No. 156.

I HAVE the honor to request that 2½ feet may be entered in my letter, No. 150, dated 13th instant, paragraph 5, as the depth of water on the calingulah of Vylore tank when it breached, and the length of the breach as 67 yards.

SUBMITTED to Government in continuation of this office endorsement, No. 223 I, dated 29th October 1877.

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

No. 35. ORDER THEREON, 10th November 1877, No. 477 I.

BEFORE passing orders on the District Engineer's report on the effect of floods in South Arcot, a further report with reference to the remarks of the Chief Engineer for Irrigation will be awaited, and Major Mead should take care that the explanations afforded are full and complete.

(True Extract.)

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

To the District Engineer, South Arcot.
" Chief Engineer for Irrigation.
" Revenue Department.

Exd. J. W. Fischer.
14 Spare Copies

Revenue Despatch
No 4830

IRRIGATION.

Govt. of [1877] Madras.

PUBLIC WORKS.

To

THE DISTRICT ENGINEER,
SOUTH ARCOT,
&c., &c., &c.

Dated November 10th.

Issued

Rect. 17 Nov 77 Encl.

G. O., 10th November 1877, No. 477 I.

NOVEMBER.

Nos. 34-35.

Floods in South Arcot.—A further report called for with reference to the remarks of the Chief Engineer for Irrigation on the effect of —.

No 6378
Comm^d to this
Board of Revenue
19 Nov 77

8 Nov 1877 Revenue Despatch