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G.O. No.

B.P. No.

174PressMis.

Dated

26-1-1875 196 .*Not to be folded or roughly handled*

Read the following letters:—

No. 413. From R. SMITH, Esq., District Engineer, Nellore, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Nellore, 3rd November 1874, No. 71.

As the water in the Pennair has fallen sufficiently to admit of an opinion being formed regarding the actual damage done to the Nellore Anicut by the recent great flood, I have the honor to submit, for your information, the following particulars.

2. In my telegram and letter, No. 69, of the 29th ultimo, I reported that the northern flank of the anicut had been turned by the stream, and that the northern wing walls had collapsed. This portion of the anicut is in the same state as it was then, but I observed this morning that about 150 feet of the body wall is *partly* demolished; that portions of two retaining walls have been injured; and that several stones on the rear slope of the anicut have been carried away and piled up on the rubble apron. I do not, however, anticipate disastrous results from these failures, as the ordinary head of water in freshes will be considerably reduced by the large volume that will find its way, round the northern extremity of the anicut, to the reach of the river below the anicut.

3. For the last three days I have been trying to construct a rubble stone dam in the line of the old Cyclopean pitching, to prevent the river cutting a very deep channel round the anicut, but with little success, as there is still 11 feet of water in the river. Two groynes are under construction, and a third will be commenced to-morrow to preserve the bank of the river from further erosion in the line of the newly formed channel.

4. Since my last report* information has been received from the Northern Delta regarding the breaching of the Covoer large tank, and of five other minor reservoirs. Two district roads (Woolavapaud and Isakapally) have been breached, but the cost of repairing them will almost be covered by the maintenance grants for those communications.

5. As several important irrigation works have been seriously damaged, a very liberal grant for Agricultural Repairs will be necessary to prevent great loss to Government and to a number of people in the valley of the Pennair. My greatest anxiety at the present moment is to get the channels open to save the cultivation.

No. 414. From the same Officer, dated Nellore, 12th November 1874, No. 77.

I HAVE the honor, in continuation of the letters marginally noted, to submit further particulars regarding the state of the works, and the damage done by the late flood, in the Pennair.

Extra No. 1 of 27th October 1874.

No. 69 of 29th October 1874.

" 70 of 31st "

" 71 of 3rd November 1874.

2. *Northern Delta of the Pennair.*—

The villages, tanks, and roads in the delta, between the Pennair and the Pydaru, have, as a rule, suffered severely; a considerable amount of private property has

been lost, a large extent of cultivation has been injured or destroyed, and some valuable land has been cut away by erosion on the left bank of the Pennair.

3. The accounts received since the date of my last report* show that 23 tanks breached on the north of the river during the flood in addition to the number (8) already reported, and I fear the list is still incomplete.

*3rd November 1874.

4. I have ordered the Central Range Officer (Mr. Plummer) to superintend, in addition to his regular duties, the emergent repairs required in the Northern Delta, as the Range Officer (Mr. Fox) is fully occupied with the numerous works in progress on the south of the Pennair. The Acting Head Assistant Collector has been deputed by the Collector to attend to the wants of the Northern Delta, and I have directed Mr. Plummer to act in concert with him.

5. As the speedy repair of the irrigation works is of very great importance, and as my executive staff is far too small to admit of work being carried on in the usual way, I have arranged with the Collector for employing the village authorities as petty superintendents and paymasters. The work executed under the superintendence of these officers will be examined and measured by a responsible member of this department, and in the event of any marked discrepancy between the value of the work done and the sum claimed, the matter will be referred to the Collector for disposal. It will, however, be necessary to allow very liberal rates in many instances, as a large proportion of the laborers are poor, homeless people, for whom employment must be found to save them from starvation. The expenditure on the repair of the Great Northern and Dorenal Roads will also be excessive for the same reason, and I would therefore suggest, for the consideration of Government, the propriety of charging a moiety of the outlay to "Relief works."

6. The accompanying tracing shows approximately the area submerged in the Northern Delta of the Pennair by the flood of the 25th, 26th, and 27th of October last.

7. *Pennair Anicut*.—This structure has sustained no further damage. A large quantity of stone has been thrown in to protect the retaining wall, where the rear slope was damaged, and a narrow gap, that I discovered in the body of the anicut at its northern extremity, has been filled in and protected with Cyclopean rubble. A quantity of stone has also been thrown in, in front of a portion of the anicut, where I found a hole close to the body wall, 18 feet in depth. The groynes on both sides of this depression have been attended to, and the strong current that caused the scour has been diverted from the immediate vicinity of the face of the anicut.

8. The rear slope of the anicut has failed in the same place as the greatest damage was done by the flood of 1870. This clearly indicates—as the section of the anicut is now much more substantial than it was then—that more waterway is necessary to insure safety in great floods, and this I intend providing for in the estimate for the repair of the present damages.

9. The water in the river has fallen below the crest of the anicut, and there is consequently a scarcity of water in the channels. Great efforts are

however being made to construct the rubble dam between the bank of the river and the northern extremity of the anicut, but the stream is very rapid, and it is impossible to complete more than 2½ running yards daily.

10. *Southern Delta*.—The closing of the breaches in the river embankment west of Nellore is in active progress, and will be completed at an early date. An estimate will be submitted as soon as possible for raising and strengthening this embankment throughout, and for pitching it with rubble near Poottapalem and in the vicinity of Baburow's chuttrum.

11. The breaches in the Nellore tank embankment at Nellore and at Baburow's chuttrum have been partly closed, and will soon be out of danger.

12. The anicut channels have been partially cleared and repaired to admit of water passing down them for irrigation, but it will take some months to clear and repair them thoroughly.

13. The river embankment on the east of Nellore stood very well during the flood, but the water overtopped the sand ridges, where there is no artificial bank, in three places, and destroyed a number of houses in the villages of Narainreddipet, Nidimusali and Kudittapalem. The flood also carried away the embankment that was thrown a few years ago across the southern branch of the Pennair, near the village of Mudivertypalem, and there is now a considerable stream running down the old outlet to the sea.

14. The following tanks breached in the Southern Delta from the effects of the flood:—

Varigondah Kasirazu Tank.	Pynapuram Katevaroya Tank.
Kalivalapalem do.	Mudivertypalem do.
Madaraz Guduru do.	Kuditapalem do.
Pemburty Tank (two calingulahs damaged also).	Gangapatam Ana do.
Bramadavem Buddi Tank.	Do. large do.
Do. Tuti do.	Amalur do.
Narakailapilly do.	Indukurpet do.

15. The Kristnapatam channel head sluice, the Kanapartypad aqueduct, a small aqueduct over the Survapilly channel, and the Allipuram regulator were slightly injured by the flood, but no masonry work in the Southern Delta was destroyed, with the exception of a small culvert in the Kristnapatam branch channel, and an inexpensive half syphon on the Survapilly channel.

No. 415. ORDER THEREON, 23rd January 1875, No. 199.

IRRIGATION, No. 45.

The further particulars given by the District Engineer, Nellore, of the extent of the Pennair flood of the 25th—26th

October last, show over what a large area of country the flood waters extended, and that on the north side of the river especially, which was not protected by embankments, the number of tanks breached was very great.

*Proceedings of the Madras Government, Public Works Department,
23rd January 1875.*

2. The measures taken by Mr. R. Smith for meeting this great emergency appear to His Excellency the Governor in Council to have been judicious, and the promptitude with which he has organized arrangements for repairing damages, and for reducing as far as possible the losses which have been sustained by the people, is noticed with satisfaction.

3. The Government will be glad to learn the result of the efforts which were being made to close the channel, which had been cut by the river to the north of the anicut; as upon the success of this operation the supply to the Southern Delta for the rest of the season is dependent.

4. For a short time after the flood the necessity for executing a large amount of work on emergency will no doubt have led to its cost being high, but thereafter it is hoped that ordinary rates will be found sufficient, while it is thought that it will be desirable to utilize those, to whom work may be given to save them from distress or starvation, and who may not have been accustomed to labor as coolies, on such employment as may be better suited to their capabilities than ordinary earthworks would be. This matter can however be determined, as the circumstances may require, in consultation with the Collector. The District Engineer will submit a report on the cost of any works which may have been materially enhanced by the employment of other than able-bodied coolies, and such orders as may appear necessary will then be issued.

5. On the District Engineer's approximate estimate of the outlay required for carrying out the extension of the anicut across the new north channel of the river, and for other works shown by this flood to be necessary, orders have already been passed.

6. The Chief Engineer for Irrigation will make such additional allotments, under Repairs, Agricultural, to the Nellore District as the exceptional circumstances of this flood may render necessary.

(True Extract.)

C. S. S. S. Colonel, R. E.,
Secretary to Government.

To the Chief Engineer for Irrigation.

.. District Engineer, Nellore.

.. Revenue Department.

.. Controller of Public Works Accounts.

Exd. S. T. Austin.

20 Spare Copies

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Revenue Department
Govt. of 1875 Madras.
PUBLIC WORKS.

To

THE CHIEF ENGINEER FOR IRRIGATION,

Ac., Ac., Ac.

Dated January 23rd.

Recd. - a - 25th

Encl.

G. O. 23rd January 1875, No. 199.

JANUARY.

Nos 413-415

14 To the Board of Revenue 23rd Jan

Floods in the Pennair.—Passing orders on papers submitted by the District Engineer, Nellore, furnishing further particulars regarding the damages done by the floods of October last.

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Comm. to the
Board of Revenue
26 Jan 75 GLL