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# TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

REVENUE  
~~PUBLIC WORKS~~

DEPARTMENT

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*N. S. S.*

2119  
GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

13th August 1878, No. 635 I.

Irrigation.

Read the following paper:—

No. 27. Endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 17th July 1878.

From Lieutenant-Colonel J. BEATTY, R.E., Superintending Engineer, Godavery District, to the Chief Engineer for Irrigation, dated Dowlaishweram, 21st June 1878, No. 940.

WITH reference to your Memorandum No. 99 G.D. of 11th instant, I have the honor to inform you that this has been so far a bad season for the deltas, owing to the low state of the river which has been much lower than it was in last year.

2. The supply of water to the Western Delta has consequently been particularly deficient, because it had to depend entirely for its supply on the new Vadapilli channel. Last year there was a small channel through the Vadapilli shoal, but the Western Delta was supplied quite independently of that channel through the gap between the Muddurlanka and the Vadivamilanka.

3. The small channel alluded to being a mere trial cut, I did not venture to close the gap until that channel had been completed, and it was then found that owing to the comparatively high state of the water in the river it was too late to close the gap; and although this was attempted, the attempt was a failure and the Western Delta continued to be almost as well supplied as the other deltas.

4. This year the case has been quite different; the closure of the gap began about the end of January and was completed some time since. Consequently the Western Delta has been entirely dependent for its supply on the new Vadapilli channel which would doubtless have fairly answered its purpose of giving a supply of water to the Western Delta had it not been for the very low state of the water in the river. The consequence of course of the very deficient supply to that delta will be a considerable loss to the ryots in seed beds, as they will not have had sufficient water for transplanting.

5. I had hoped to have sent you ere this a report on the working of the Vadapilli channel, but have been waiting for some information which the officer in charge of the Eastern Delta has been collecting and which will no doubt reach you in a few days. The four dredgers have been continuously at work up to this date and no doubt the comparative sections shortly expected will show considerable progress.

6. I send herewith diagrams showing the rise and fall of the river in May and June 1878 on the upper sills of the three head locks, also a diagram showing the rise and fall of the river at Dowlaishweram in the month of June from 1867 to 1878.

7. I am glad to observe by the newspapers that the monsoon set in at Bombay on the evening of the 13th instant, so that it is highly probable that we shall have a fresh in the Godavery by the 26th or 27th, and in all probability the water will rise over the anicut before that date.

No. 27-A.

From G. T. WAHL, Esq., Acting District Engineer, Godavery District, to the Chief Engineer for Irrigation, dated Dowlaishweram, 29th June 1878, No. 1,040.

In continuation of my No. 940 of 21st instant, I have the honor to send herewith two sheets of cross sections of the channel through the Vadapilli shoal showing how it was at the commencement of May and on 15th and 16th instant.

Two sheets of cross sections.  
One diagram.

" copy of letter to the Presidency District Engineer, No. 1,039, of 29th June 1878.

2. From the commencement of the work in November, efforts have never been relaxed to get the channel out to the full dimensions originally decided on, viz., 150 feet bottom width and to 6 feet below crest of anicut, and as it has for some time been apparent that those dimensions were insufficient to pass to the Western Delta a proper supply of water, their increase would have been proposed had there been any probability of our being able to carry out the work; but the five dredges have had quite as much as they could do to get the present channel bottomed out so well as it has been, and only unremitting watchfulness and care have kept them working as continuously as has been the case. To have widened the channel merely to the depth that it could have been taken out to by hand would not, it was considered, have been of such benefit as would have warranted the cost.

3. The scour down the channel did not help us so much as might have been expected from the surface slope of the water. Much of the bottom is of coarse sand, and near the end of coarse sand and gravel. And the sand which was pushed along the bottom was not carried clear of the end of the channel and dissipated, but was merely rolled down the face of the sand cliff in which the channel joins where it joins the old wide and deep channel, and so adding to the lower end of the shoal making the channel to be cleared out the longer.

4. The operations for deepening the channel will be continued till the water rises above the crest of the anicut which will probably be in three or four days, when it will be advisable to have the dredges towed away to the Workshops where they will require extensive repairs.

5. Though the channel has not been all that the Western Delta wanted, the benefit which the Delta has derived from it must have been great. Had it not been for the channel that delta would positively have got no water when the river level was lower than about 2 feet below crest of anicut\* (it has been below that level on 19 days since 1st April), and never after the reopening of the canals at commencement of April would it have received more than a pitiful dribble and no boat could ever have approached it; whereas this channel has supplied it with water sufficient doubtless for seed beds for many thousands of acres of low lying lands to which early transplantation is necessary and has enabled light boat traffic to be carried on with only short interruptions.

6. It is of the utmost importance that all our dredges should by December next be in good working order for the extensive work which will probably be required of them next season, and I have this day addressed the District Engineer of the Presidency on the subject of their boilers and enclose copy of my letter.

7. I enclose a diagram showing the heights of water at Dowlaishweram and Vigeshwaram for May 1878, with two slips attached showing the same for May 1876 and May 1877.

Submitted for the information of Government with reference to paragraph 4 of G.O., No. 504-I, of the 17th June 1878, in which it was desired that a further report on the flow of water to the Western Delta might be made.

Information of later date has been supplied by the weekly telegrams which show that the Godavery began to rise towards the end of June and that by the beginning of July the water-supply was sufficient. The telegram of the 11th instant gives a depth

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at 1 inch on the sill of the Vigeshwaram head sluice, and this is more than

The information contained in the papers now submitted shows:—

1st.—The water level at the anicut in June from 1867 to 1878 or for twelve years.

2nd.—The water levels at the head locks of the three sections of the delta in May and June 1878.

3rd.—The water levels at the Dowlaishweram (Eastern Delta), and Vigeshwaram (Western Delta), head locks in May 1876-77 and 1878.

4th.—Sections of the channel which has been cut through the Vadapilli shoal to supply the Western Delta in connection with the closure of the channel between the Muddur and Vadivani lunkas.

The diagram for June shows that 1878 has been a year of exceptionally small supply, due partly to the small rainfall of 1877 over the basin of the river and the late setting in of the south-west monsoon this year. The diagrams for June 1878, giving the water levels at the three head locks, show that the want of rain at the new channel through the Vadapilli shoal made the supply of the Delta less than that of either of the other deltas, but there was too little the river to allow either delta to be properly supplied. The diagrams of the levels at the Dowlaishweram and Vigeshwaram head locks for May of the years 1876 and 1878 show that the level at Vigeshwaram in 1876 was materially lower than at Dowlaishweram, in 1877 the levels were almost identical, and in 1878 it was much the same as in 1876.

It is of course not possible at present to draw conclusions as to the results of the arrangements carried out this year for securing a direct approach to the anicut and for the supply of the Western Delta. The draught north of the Vadivani lunka cannot but be increased by the closure of the passage east of that great shoal or island, and it will depend much upon the freshes of the season what the effect of this draught will be.

It will be advisable to take monthly sections by soundings of the channel through the Vadapilli shoal and also of the channel between the Vadapilli and Vadivani lunka at intervals of information as to the action that may be going on may be available as to the nature of the operations if found necessary.

Reclamation of the west side of the Vadivani lunka is very desirable, and if the engineer finds an opportunity for aiding and accelerating such erosion of the soil where in contact with the current, and so obtaining an undercut, to be done.

The telegrams up to last week give the following results—

the sign minus representing water level below } crest of anicut.  
the sign plus do. do. above

|                    | Days.      |            |           |            | Remarks.                   |
|--------------------|------------|------------|-----------|------------|----------------------------|
|                    | 22nd June. | 27th June. | 4th July. | 11th July. |                            |
| ... ..             | — 31       | — 23       | + 18      | + 47       | The figures denote inches. |
| ... ..             | — 52       | — 38       | + 15      | + 37       |                            |
| of water level ... | 21         | 15         | 3         | 10         |                            |

These figures indicate that as the level of the water in the river rose the channel through the Vadapilli shoal rapidly increased in efficiency.

The increase of difference on the 11th July is explainable partly by the circumstance of half (the eastern half) of the Dowlaishweram anicut and the Muddur anicuts has been temporarily raised by leaving in the place

for 1 foot in height, instead of removing the planks as is usual. This was ordered to increase the draught towards and discharge over the Vigeshwaram anicut, and consequently the surface slope is greater on the western side than at the rest of the river. The shoals already referred to on the western side would also tend to obstruct the passage of water and to lower the water level after these have been passed. So far as the facts ascertained can be accepted as an indication of results, the undersigned considers that the arrangements made for rectifying the effects of shoals on the western side of the river have been more satisfactory than would have been anticipated had it been foreseen, when they were ordered to be carried out, that the river would in May and June have been so remarkably low.

6. With regard to paragraph 6 of the District Engineer's letter, No. 1,040, it may be noticed that designs and estimates for the boilers referred to have been received from the General Superintendent of the Public Works Workshops, and as soon as information, which has been asked for regarding the reasonableness of the estimates has been received, they will be disposed of.

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

No. 28.

ORDER THEREON, 13th August 1878, No. 635 I.

THESE papers refer to the arrangements made under the orders of the Chief Engineer for Irrigation for the better supply of the Western Delta of the Godavery and for remedying the effects of shoals on the western side of the river above the anicut. The state of the river in May and June occasioned considerable anxiety as to the supply of the Western Delta in particular, but since the river began to rise that part of the Delta has been well supplied. The results of the work carried out should be reported on at the close of the season, and in order that the information may be as complete as possible the remarks made in the last two clauses of paragraph 4 of the Chief Engineer's endorsement should be carefully attended to.

(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 District Engineer, Godavery.  
" " Kistna.  
" Chief Engineer for Irrigation.  
" Revenue Department.

T. O'Connor.  
pies

Revenue Department

N<sup>o</sup> 3749

IRRIGATION.

Govt. of (1878) Madras.

PUBLIC WORKS.

THE DISTRICT ENGINEER,  
GODAVERY,  
&c. &c. &c.

Dated August 13<sup>th</sup>.

Forward

Recd. *25/8*

Encl.

G. O., 13<sup>th</sup> August 1878, No. 635 I.

AUGUST.

Nos. 27-28.

No 2119

Communicated to the  
Board of Revenue

28 August 1878

Western Delta of the Godavary.—The results of the work carried out for the better supply of water to the — and for remedying the effects of shoals on the western side of the river above the aicut to be reported on at the close of the season.

11 Files Board of Revenue 24.11.1878