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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	434 (9)	Press
B.P. No.		Mis.
Dated	17 2	18 76.

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ABSTRACT.—*Colair Lake Irrigation.*—Communicating to the Public Works Department Proceedings of the Board of Revenue relating to —, and accepting the conclusions and recommendations of the Board of Revenue on the points specified.

No. 308. ORDER THEREON, 17th February 1876, No. 434.

IRRIGATION, No. 31.

COMMUNICATED to the Chief Engineer for Irrigation and to the Superintending Engineer, Kistna, with reference to G.O., dated 29th September 1874, No. 2,732.

2. A design and estimate should be prepared in the Kistna District for providing a total length of escape weir, for the discharge of water from the Colair lake basin, of about 1,000 feet, the crest being placed at ordinary H.W.L. (tidal). The present weir, 300 feet in length, can have its crest adjusted and the cast iron gates removed, and a new weir should be designed with numerous sluice vents furnished with self-closing swing shutters, and with the sills at $4\frac{1}{2}$ to 5 feet below the crest of the weir. These improvements will be chargeable to Agricultural Miscellaneous, and the estimates should be submitted in time for entry in the Budget of 1877-78.

3. With regard to the Kistna Eastern Delta Bank Canal, it is observed that paragraph 2 (2) of the Order in the Revenue Department contemplates the irrigation of only 3,000 acres in the Zemindary tracts through which the canal will pass before reaching Divi; but paragraph 10 of the Proceedings* of the Board of Revenue

* No. 3,023, dated 2nd November 1875.

notices that about that area is unfit for anything but wet cultivation, that much land is suitable for irrigation, and for this water will no doubt be eventually taken. What this additional area is has not been indicated. In paragraph 41 of the Inspection Memorandum,† the Chief Engineer for Irrigation proposed to provide water for 100 acres per square mile of the Zemin-

secondary lands directly commanded by the Bank Canal, and the area so commanded is about 83 square miles, so that the proportion named would amount to 8,300 acres. Unless the Collector is of opinion that the allowance requires revision, the arrangements of the Bank Canal should be worked out upon this basis. Subsidiary works for distribution of water to the Zemindary lands will not be undertaken until a direct demand for water may be made.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the District Engineer, Kistna.

„ Chief Engineer for Irrigation.

„ District Engineer, Godavery, with a copy of No. 2,732, of 29th September. 1874.

Revenue Department.

Board of Revenue.

„ Examiner of Public Works Accounts.

Exd. S. T. Austin.

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No. 142. Read the following Proceedings of the Board of Revenue, dated 2nd November 1875, No. 3,023:—

Read the following letter from H. NEWMAN, Esq., Acting Collector of the Kistna District, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Masulipatam, 28th September 1875, No. 1,258.

I HAVE the honor to reply to Board's Proceedings, No. 3,260, dated 12th November 1874.

2. I am of opinion that the proposal in Colonel Mullins's memorandum to lower the level of the Colair Lake as much as possible is the best that can be made in regard to it.

3. The dalwa cultivation is not* very extensive, and, except since the breach in the bund was filled in, as Colonel

* The average revenue derived from dalwa crop from Fasli 1275 to Fasli 1284 was Rs. 7,266. Mullins says with some difficulty, there had been no return from it since Fasli

1277, when the breach was cut by Mr. Thornhill, then Collector.

4. It was replaced by Mr. Leman merely as a temporary measure and to assist the ryots who had suffered much in that year by the overflow of the lake and the Budamair.

5. Colonel Mullins is quite correct in saying dalwa is not a crop to be encouraged as it is only a second crop; in fact, it is only cultivated because the circumstances of the locality preclude any other cultivation. The land so cultivated is submerged when the lake is full. If the lake does not fill no dalwa cultivation and no ordinary wet cultivation can be made, for the ryot cannot afford the cost of raising the water sufficiently. If the lake fills the waters do not subside sufficiently for cultivation till November or December, and then it is too late for any but this three months' dalwa wet cultivation. If it be drained so that the level of the lake-water is seldom above sea high water-level, then a large tract of land will be made capable of cultivation and will, I have no doubt, be taken for dry crops until the channels designed to irrigate the adjacent lands are complete.

6. The method of dealing with the lake has been advocated by many Engineering and Revenue Officers, whose opinions have been recorded.

7. As the Board observe, there is much cholam land in the Davaracota Zemindari for which irrigation will never be taken, and the extent of land which is fit for no other than wet cultivation has been roughly estimated at 3,000 Acres.

8. To the question whether the wet assessment prevents the occasional cultivation of dry crops in the Divi Pargana I have to reply in the negative, for the present rule is that when water fails the ryots who utilize their wet lands for dry cultivation are to be charged dry assessment only.

9. The chief reasons why the ryots do not avail themselves of this privilege are that the wet fields are of a stiff soil difficult to plough unless the land is soaked with water, and being small it is not convenient to run the long furrow suitable for dry crops, and the ryots have a notion that wet fields used for dry crops will not give a good outturn wet to the cultivation of the succeeding year, and that such soil is not fit for, and will not produce, a good dry crop when the endeavor

*Proceedings of the Madras Government, Revenue Department,
17th January 1876.*

is made, and that it has not ever been customary here to raise a dry crop in wet lands.

10. There is another probable reason, which is that they cannot commence the dry cultivation till all chance of the tanks filling is over, i.e., till after September or October; for if water came to the tank after all they would be charged water-tax in addition to the land assessment, and therefore there is only time for one late dry crop, and, as they are charged the full dry rate and are afraid of the crop not turning out well, they prefer to make sure of their claim to remission and avoid the chance of loss by a crop that may not pay the assessment.

11. I think it might perhaps be worthwhile to lower the charge and ask only two-thirds the dry rate. This might induce ryots to attempt to cultivate the ayacut with dry crops and for fodder in the event of a failure in the supply of water.

12. It would be a very good thing to encourage, and, as the present usual practice of leaving the whole ayacut waste had doubtless its origin in the charge of wet rates which was formerly made and which rendered the cultivation of fodder impossible, it may be that as soon as it might come to be generally known that two-thirds of the dry rate only was charged in the event of there being no irrigation the old custom of leaving the fields waste might come to be abandoned.

This letter contains the replies of the Acting Collector of the Kistna District to the points referred to him for report in Board's Proceedings, dated 12th November 1874, No. 3,260.

2. 1st.—As to the treatment of the Colair Lake—

Paragraphs 36 to 40 of Colonel Mullins's memorandum of 7th May 1874 are devoted to the consideration of this subject, and he points out that it is desirable that it should be determined in what way this great basin should be treated. This question was fully discussed in 1864 and in subsequent years.

There has been a very general consensus of opinion that the first requisite in dealing with this great sheet of water is to reduce the level of the water to the lowest possible point.

3. Colonel Mullins is clearly of the same opinion, and the Acting Collector fully supports it. The only argument against it is that a certain precarious hot-weather cultivation* will be lost thereby.

4. The Acting Collector shows that the average revenue from this is only 7,000 Rupees, and it is so uncertain and spasmodic in its nature that no one will be seriously injured by its loss. The lands are not held on putta, and no compensation will be due to any one if it is abandoned.

5. The advantages to be gained by draining the lake are that a large area of land now submerged will be made available for cultivation or for pasture, and that the drainage of the surrounding lands will be greatly improved.

*Proceedings of the Madras Government, Revenue Department,
17th January 1876.*

6. It is probable that there will not be sufficient water available from the Godavery and Kistna channels for some years to provide irrigation for all the land laid bare, but it is expected that much of it will grow dry crops; at all events, the best mode of disposing of it can be best determined when it is drained. Colonel Mullins proposes two alternative plans for draining—the one is to enlarge the opening and allow the water to run freely to the sea through the Upputér, in doing which it must be remembered that a road will be given for the flow of the tide into the lake, the bed of which is below high water-level.

7. The other plan is to extend the existing calingulah to a length of about 1,000 feet and to provide it with self-acting sluices $4\frac{1}{2}$ or 5 feet below the crown: by this means Colonel Mullins points out that the depth of water would be considerably lowered even during the rains and that after the freshes had subsided it would have the effect of keeping the water at eighteen inches or two feet lower than if the tide were allowed to flow into it.

8. The Board very strongly recommend that the latter alternative be adopted: it will lay bare far more land for eventual cultivation, and, what is of much greater importance, it will have a far greater influence on the drainage of the surrounding tracts which are now often hopelessly flooded.

9. 2nd.—As to irrigation of lands under the bank channel in Zemindaris—In treating of the extension of the canal along the eastern bank of the Kistna, Colonel Mullins points out that its eventual object will be to supply irrigation to the island of Divi, but that in its course it will pass chiefly through Zemindari lands, and that the demand for water in them is so limited that it will not be worthwhile to make provision for their irrigation.

10. A great deal of the land traversed by the canal is so valuable for the growth of cholum and other dry crops that irrigation will probably never be demanded for it, but much land is suitable for irrigation, and the Acting Collector says that about 3,000 Acres are reported as unfit for anything but wet cultivation. The Board have no doubt that eventually water will be taken for all lands suited for irrigation, but it may be some years before the demand arises. They are of opinion that provision should be made accordingly in planning the main channel, but that no subsidiary works should be undertaken till they are actually called for.

3rd.—As to the cultivation of dry crops in wet lands in Divi—

Colonel Mullins having observed that all the wet lands in Divi on the occasion of his visit were left waste owing to a failure in the supply of water to their tanks, inquired if there was anything in the rules of assessment which deterred ryots from so cultivating them. The Board pointed out that under Standing Order No. 17 of 1873 ryots are only charged dry rates when cultivating dry crops in wet land, so that there was nothing in the rules to prevent them from doing so. The Acting Collector now adds that the wet fields are not generally suitable for any culture; that the preparation for wet crops unfits them for dry grains and *vice versa*, and moreover that it has never been customary to raise dry crops in wet land: he also says that ryots wait till the last in hopes of getting water for wet crops, and that

Paragraphs 9, 10, and 11.

then it is too late to fully utilize the land for dry culture, and he suggests that some good might be done by allowing a still lower rate of assessment for lands cultivated with dry crops. The Board do not consider that any good would be gained by a further reduction of assessment: if people were otherwise disposed to grow dry crops they will not be deterred by the highest dry rate. There is much force in the reason given by the Acting Collector in paragraphs 9 and 10, and the Board would leave the ryots to do as they please in the matter. Mr. Newman has omitted to mention that they always cultivate dry crops in the beds of their tanks, which are very extensive, after the water has been drawn off, and that the fertility of the lands being great they invariably secure good returns.

(A true Copy and Extract.)

(Signed) H. E. STOKES,
Acting Secretary.

No. 143. ORDER THEREON, 17th January 1876, No. 71.

Irrigation, No. 3.

COMMUNICATED to the Public Works Department in continuation of Proceedings, dated 30th November 1874, No. 1,464.

2. The Government accept the conclusions and recommendations of the Board, i.e.—

(1) That the Colair Lake should be drained to the lowest possible level by the second of the two alternative means suggested by the Chief Engineer for Irrigation, viz., the extension of the existing calingulah;

(2) That in planning the main channel under the bank canal project, Eastern Delta, provision should be made for the irrigation of about 3,000 acres in its course through Zemindari tracts; no subsidiary works, however, being undertaken until they are actually called for; and,

(3) That nothing is needed on the part of the Revenue Department to encourage the ryots to cultivate dry crops in the Divi Parganah when the supply of water to their tanks fails.

3. On the first question, it has been shown, conclusively, that the loss of an average annual revenue of Rs. 7,000, now obtained from the precarious dalwa or hot weather cultivation on the margins and islands of the lake, will be abundantly compensated by a large area now submerged becoming available for cultivation or for pasture. It may be some years before all the land laid bare is placed within the reach of the Godavery and Kistna channels; but dry crops, which will be grown in the mean time, will go far to make up for the present loss, and there will, above all, be the great advantage of ensuring free and unobstructed drainage for large and valuable delta tracts.

4. On the second question, it is to be observed that the chief object of the bank canal is, as pointed out by Lieutenant-Colonel Mullins, to benefit the island of Divi, in which it is expected that some 45,000 acres will be irrigated. Under the present uncertainty, therefore, as to what extent irrigation will be sought for the intervening Zemindari lands, the Board's suggestion seems to be the only eligible one.

5. On the third question referred for consideration in the Revenue Department as pointed out by the Board, the ryots are free to cultivate dry crops, paying only dry assessment. The fact is, the feasibility of a temporary change from wet to dry cultivation depends upon conditions irrespective of the Government demand.

(True Extract.)

J. Andrus
Chief Secretary.

To the Public Works Department.
" the Board of Revenue.

Exd. F. R. Bantleman.

FORMER CASES.

Current No.

of 187

M. WORKS FORM No. 3.

Current No. 455

From

The Revenue Dept

No. 71

Dated

17th 30th Jan'y: 1876

Subject:—

Communicating, Proceeding
of the Board of Revenue relating
to the Solair Lake Irrigation

LATER CASES.

Current No.

of 187

ENCLOSURES.

From

to

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G.O. No 434. 17. 2. 76

Orders and Proceedings in file.

Depart- ment.	No.	Date.	ENDORSEMENTS.		
			Depart- ment.	No.	Dated.
P.W.D.	556	29 Sept			
	557	1/10			
	170	19 Dec			
	171	1/14			

No 434

T.W. Dept 11x



Proceeding of the Madras Government
Read the following.
17 Feb 1876

to: Rev. Dept. (G.O. No 71 of 17 Jan'y 76)

Communicated to the Chief
Engineer for Irrigation and to the
Superintending Engineer, Kistna,
with reference to G.O. dated 29th Sep-
tember 1874. No 2732.

2. A design and estimate should
be prepared in the Kistna District
for providing a total length of
escape weir for the discharge of
water from the Solair Lake basin
of about 1,000 feet the crest being
placed at ordinary H.W.L. (tidal).
The present weir, 300 feet in length,
can have its crest adjusted and
the cast iron posts removed, and
a new weir should be designed
with numerous sluice vents furnish-
ed with self closing swing shutters,
and with the piers at 4 1/2 to 5 feet
below

N 307

below the crest of the weir. These improvements will be chargeable to Agricultural Miscellaneous, and the estimates should be submitted in time for entry in the Budget of 1877-78.

With regard to the Krishna Eastern Delta Bank Canal, it is observed that para 2 (2) of the Order in the Revenue Department contemplates the irrigation of only 3,000 acres in the Zemindary tracts through which the Canal will pass before reaching the Div, but para 10 of the Proceedings of the Board of Revenue notices that about that area is unfit for anything but wet cultivation; that much land is suitable for irrigation, and for this, water will no doubt be eventually taken. What this additional area is has not been indicated. In para 41 of the Inspection Memorandum, the Chief Engineer for Irrigation proposed to provide water for 100 acres per square mile of the Zemindary lands directly commanded by the Bank Canal

N^o 3023 dated 2^d November 1875.

Proceedings of Madras Government dated 29th September 1874, N^o 2732.

and the area so commanded is about 83 square miles, so that the proportion named would amount to 8,300 acres. Unless the Collector is of opinion that the allowance requires revision, the arrangements of the Bank Canal should be worked out upon this basis. Subsidiary works for distribution of water to the Zemindary lands will not be undertaken until a direct demand for water may be made.

Adm. S.

W. H. N.

To The District Engineer, Krishna. - with 15C of Rev: order
Chief Engineer for Irrigation.
District Engineer, Godavery,
with a copy of N^o 2732 of 29th September 1874.
Revenue Department.
Board of Revenue.
Controller of Public Works Account. with 15C of Rev order

Disp - 2. 3. 76

455
Govt. of 1876: Madras.

PUBLIC WORKS.

To O. E. Pistorius

11872

Dated

Issued

Recd

Encl.

G. O. 17 Feb 1876, No. 434

Nos. 307-308

Irrigation of the Colair Lake
Thiruvana Grit - Order
order on the Pres. of the
Revenue Dept Communi-
cating Pres of the Board
of Revenue relative to the