M.R.O. 1—30,000—16-10-59.

MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

G.O. No.	654	Press / ~~Mis.~~
286-87		
Dated	11th March	1869.

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department, 11th March 1869.

No. 286. Read the following Proceedings of the Board of Revenue, dated 28th January 1869, No. 592:—

Read the following letter from the Commissioner of the Neilgherries, to the Acting Secretary to the Board of Revenue, dated Ootacamund, 26th October 1868, No. 57.

1. With reference to the water project sanctioned for Ootacamund, north and south of the lake, I have had under consideration the expediency of a water charge, and have read Proceedings of Board, No. 2,354, of 31st March last, and the replies of the several gentlemen referred to in those Proceedings.

2. When the projects are completed, it is calculated that water will be brought to 240 European houses and 401 Native houses. These houses are now rated for Municipal purposes at a certain annual value, five per cent. upon which yields to the Municipality about 11,000 Rupees per annum. Supposing we take one per cent. of this annual value for a water-rate we shall get $\frac{11,000}{5}$ = 2,200 Rupees.

3. For conservancy and distribution purposes, Major Farewell is of opinion that the following Establishment will be necessary:—

	Rs.	
Overseer	50 per mensem.	
Two Reservoir Lascars to live on the spot at 8 Rupees a month	16	
Four Coolies for north Channel at 8 Rupees a month ...	32	
Four do. for south do. do. do.	32	
	130	
Tools and masonry repairs	20	
	150	150 × 12 = 1,800 per annum.

4. When the projects have been completed, it will have to be decided whether the channels be placed under the control of the Municipality, in accordance with Section 99 of the Towns' Improvement Act, or be retained in the hands of Government; in either case it seems to me that a special Act will have to be passed, authorizing the levy of the water-rate.

The Board resolve to lay the foregoing letter before Government, for their consideration and orders.

2. In connection with the Ooty south water-supply project recently sanctioned, the Commissioner of the Neilgherries submits, in communication with the Engineer Officer, an estimate for the establishment required for purposes of conservancy and distribution of the supply, at a monthly cost, inclusive of 20 Rupees for tools, &c., of Rupees 150, or Rupees 1,800 per annum.

3. The Board are of opinion that it will be requisite to add at least 10 per cent. to the estimate for unforeseen contingencies, such as the repair of breaches, &c., and this would raise the cost of maintenance to about 2,000 Rupees a year. The Board are not aware of the estimated cost of the work nor of the length of

channel and number of cisterns to be maintained. But as they will doubtless extend over several miles, the establishment proposed seems reasonable.

4. To meet these charges the Commissioner proposes to levy a water-rate on all house property, European (240 houses) and Native (401 houses), to which water will be supplied by the projected works at one per cent. of the rated (to Municipal purposes) annual value. He estimates the result at 2,200 Rupees a year.

5. The Commissioner does not state what progress has been made with the works, and whether an establishment for maintenance and distribution is immediately required. He observes, however, that "it will have to be decided whether "the channels be placed under the control of the Municipality, in accordance with "Section 99 of the Towns' Improvement Act, or be retained in the hands of Government." In either case he considers that a special Act authorizing the levy of water-rate must be passed.

6. The point for decision *in limine* is therefore whether the control and administration of the water-works for the supply of South Ooty shall vest in the Municipal Commission under Section 99 of Act X. of 1865, or be retained by Government.

7. On this point, as well as on the water-rate to be charged, several gentlemen and Officers of Government have favored the Board with their views under Government Order, 18th March 1868, No. 699. The Collector of Coimbatore

Dated 20th April 1868.

considers that "the reservoirs and channels should be made at Government cost," the water distributed being charged for to those to whom any extra or increased supply is given by volume. The Superintending Engineer, Colonel Walker, is

15th May 1868, No. 42.

apparently not in favor of Government interference, and would charge a water-rate of six pies per month for each gallon supplied. Major Farewell is of opinion,

20th April 1868, No. 16.

(1), that all streams, which supply more than one property, should be taken up by Government, together with sufficient land on either side to enable the channel establishment employed in conservancy to have access to all parts; (2), that each dwelling have a fixed allowance of water allotted to it, according to the monthly rental;* (3), a water-rate be charged for purposes of maintenance, conservancy, and distribution at the rates shewn in the margin; (4), that all "the properties "be registered, shewing the water-rate "and the quantity of water appropriated to them." Captain Law considers "that the responsibility of the distribution of water should vest in the Municipal Commission."

* At 50 Rupees and upwards 2 Rupees water cess, 450 Gall. per diem.
" 10 " 50 Rs. 1 Re. 300 " " "
For every 10 Native houses 300 " " "

Two Rupees per month on each house rented at Rupees 50 and upwards.
One do. do. at Rupees 10 to 50.
Two Annas per month for each Native house.

Dated 20th April 1868.

8. Mr. Rohde deprecates the construction of the supply or distribution works by Government, and observes that "should a supply of water for Municipal

Dated 8th April 1868.

purposes be required, the Municipality are competent for the work; and in the case of individuals they can take care of themselves." Mr. Ouchterlony considers that

Dated 28th March 1868.

when the supply channels are completed, "they must be placed under strict con-"servancy. Probably that of the Municipal Commission would be the best, as "complaint could be more easily made and more promptly redressed (paragraph "12);" that "a water-rate should not go beyond what may be necessary to keep "the reservoir and channels of supply in good order," and adds "such a necessary "of life as pure and wholesome water should not be made a subject of taxation "(paragraph 13)." Mr. Haunington states his views as follows:—"In a station

Dated 11th May 1868.

"where a Municipality exists, application (for water) should be dealt with by the "Municipality, which can make its own terms as to rates."

9. Mr. Roupell considers that "every Government scheme for the

Dated 20th May 1868.

"supply of water, including the practical daily working after completion, should "be taken up as a Government project, and not with any idea of being hereafter "under Municipal management and control, though there would be nothing to "hinder the adoption of the latter course should it appear advisable" (paragraph 3); that "a channel establishment should be employed by Government to look after "not merely such portions of the channel as pass through waste land, but such "portions as lie within private holdings:" the necessary pathways along the banks being reserved. He would limit the water-rate to what "will suffice to cover the "cost of maintaining the supply channels in efficient order, and of paying the "establishment connected therewith."

10. It is obvious that a rate must be levied for the maintenance of the channels and conservancy and distribution of water after the sanctioned works have been completed, and the water delivered within Municipal limits.

11. The Board consider, therefore, that the direction and control and management of their own water-supply must be made over to the rate-payers whose Commissioners are the best judges of the needs of individuals and of the establishment required. The law contemplates this condition (Section 99, Act X of 1865), and the distribution of a domestic supply of water in a town, and collection of ordinary town water-rates, are not matters properly within the scope of Government interference. The views of the persons who were consulted are suggestive as to the manner in which rates may be assessed; but the Municipal Commissioners are the proper persons to move in this matter.

12. The Board would suggest that the rate should cover interest of the public money expended at 5 per cent., and the works should be redeemed by the Municipality within ten years. On this point the Commissioner should report on ascertaining the views of the Municipal Commissioners now called for.

13. The Board do not perceive the necessity for special legislation, as proposed by the Commissioner. By Section 99 of Act X of 1865, all public channels come *ipso facto* under the control and direction of the Municipality, and they are empowered to raise funds for "generally doing such things as may be necessary "for the preservation of the public health" (Section 25), or with the sanction of

Government, "for any other Municipal purposes than those specified in Section 25 of this Act (Section 29.)" Providing an abundant supply of good wholesome water is clearly an object within the provisions of the Law. It is to be remembered, however, that although the channels are within Municipal limits the springs from which they are supplied are not.

14. The Board would recommend that Government declare that as each section is completed, the water works will be made over to the Municipality; that the Commissioners be requested to consider what establishment is required, and to provide for its due maintenance and for the realization of the interest of the public monies to be expended on the work, as well as for the redemption of the works within ten years.

15. Copies of the letters referred in these Proceedings are herewith forwarded for the information of Government.

No. 287. ORDER THEREON, 11th March 1869, No. 654.

Miscellaneous.

The Government concur in the views of the Board of Revenue as expressed in paragraph 14 of their Proceedings. The necessary orders will accordingly be issued in the Public Department.

(True Extract.)

(Signed) R. A. DALYELL,
Acting Secretary to Government.

To the Board of Revenue.
,, the Public Department.

Exd. G. A. Turton.

Govt. of Madras
1869 Jan. to March
REVENUE.

To

THE BOARD OF REVENUE,

&c., &c., &c.

Dated March, 11th.

Read.

G. O., 11th *March* 1869, No. 654.

MARCH.

Nos. 286-287.

Ootacamund Water Project.—Proposal of the Board of Revenue to make over the works to the Municipality, approved. Necessary orders to be issued in the Public Works Department with reference to it.

From J. OUCHTERLONY, Esq., to the Secretary to the Board of Revenue, dated Ootacamund, 28th March 1868.

1. I have the honour to acknowledge copy of letter, No. 1,325, from the Board to the Government, dated 22nd February 1868, on the subject of the water supply on the Neilgherry Hills.

2. The question, I presume, has reference chiefly to the Government streams in existing stations, and not to those on the hills generally.

3. The most important place to be considered is of course Ootacamund, alike as being the most populous station, one in which the water supply has long been a vexed and confused question, and because in late years the supply from springs has sensibly diminished.

4. I beg to express my entire concurrence in the view laid down by the Board, as to the order of importance in which water should be supplied; namely, first for household purposes; second, for gardens; and third, for general cultivation; and I believe that, by acting on a judicious principle, the two first objects may be secured at Ootacamund, and a residue be left for the last use.

5. The leading principle of course is, that water from all natural sources shall be husbanded as much as possible, and all running to waste prevented.

6. To this end the highest springs should first be tapped, and the water led in an easy channel as far as the hills permit its supplying residences. It should then return past lower lying residences, and receive the waters of lower springs; thus moving to and fro, and receiving successive supplies of water at different levels, until the utmost amount of utilization was accomplished before any water ran to waste in the lake. This is quite opposed to the present system, or rather no system, where dams are made to channels cut, to further some individual object, and never for the general good.

7. The scheme that I have outlined above is not mine, but that of the Reverend Mr. Griffiths, who some time since explained it to me, and pointed out the site of the various springs to be utilized, and the lines that the channels would take. To carry it out, professional knowledge is hardly required. A familiar acquaintance with the localities of Ootacamund springs is the thing needful; and I believe that there is no person on the hills, who has the amount or any thing approaching to the amount of knowledge that Mr. Griffiths has on this subject; and when to this is added an extraordinary speciality for tracing a road and leading a water-course, (I am expressing no opinion of my own, but repeating what used often to be said to me by an authority that will not be disputed, Major Francis, of the Madras Engineers,) I am convinced that, if his services could be made available, the public good would be essentially served by employing Mr. Griffiths to carry out his long desired and comprehensive scheme for a water supply to Ootacamund.

8. In respect of supplies of water that are now appropriated to private purposes, I fear that it will be found a very difficult matter to interfere with them, or determine how they shall stand. No judicial decision, so far as I am aware, has yet been invoked on any of them, notwithstanding the disputes and jealousies that they give rise to, and "long enjoyment" forms a title that it is not easy to disturb. Legislative enactment will probably have to be resorted to, to enable any thing decisive to be done; and I think it could not be complained of, if, while established rights (prescriptive or other) are respected, the Collector or other officer should have the power of interference where water was so dealt with as to involve waste.

9. The diminished supply of water in and about the station of Ootacamund, at the present day, is no doubt in a great measure ascribable to the late seasons of drought; but it is a question whether other causes have not been sensibly at work. The natural reservoirs of water are the

forests and the swamps. The former have been largely cut down, and the latter drained for the cultivation of potatoes, besides having their water-retaining power most seriously damaged (and this evil exists and is increasing all over the hills) by the trampling of cattle. Not only, however, have these sources of water supply been largely dried up, but a new element appears to have been (unwittingly) introduced for aggravating the evil.

10. It has been remarked that, while some trees receive moisture through their leaves, and pass it into the earth, (like our old forest trees,) others reverse the process, such as the Acacia, &c. These latter take up moisture through their roots, (which are surface-feeders,) and evaporate it into the air. Many years back the station of Ootacamund was singularly bare of trees, and the rapid growth of the now prevalent Acacia, made all resort to it for ornament, privacy, and shade. Its injurious operation on surface water has become known too late. The whole place is filled with these trees, which multiply in a marvellous manner by shoots from their spreading roots; and where an Acacia grove exists, water fails and springs diminish or dry up.

11. The worst is, that all these disturbances of our water supply are almost irremovable. The original forests cannot be replaced, the swamps be at once restored to their spongy character, or the superabundance of Acacias be rooted out. But the question is worthy of inquiry, whether some means should not be resorted to for arresting the progress of the evil, and, at all events, for removing and preventing the planting of Acacias in the neighbourhood of springs.

12. When water channels, such as I have alluded to at the commencement of this letter, are completed, it is desirable that they should be placed under a strict conservancy: probably that of the Municipal Commission would be the best, as complaints could be more easily made, and more promptly redressed.

13. In respect of a water rate, I should hope that such would not go beyond what may be necessary to keep the reservoirs and channels of supply in good order. It is to be remembered that the present disorganized state of the whole matter arises from past neglect, and the absence of any settled principle of action. All might have been adjusted while the station was (so called) a Cantonment of Government. Now it remains only a sanatarium for all India; and in an essential degree for public servants. Surely such a necessary of life to these as pure and wholesome water should not be made a subject of taxation.

14. I am not aware whether I am expected to allude to the water supply on the Hills generally; as being more a revenue question, it appears to me that it would be presumptuous to interfere with it. But I cannot help again entering the question of the swamps, which are being ruined by the increasing herds of cattle, which now graze on the hills, and constantly traverse and feed in the swamps. Sportsmen, who have more opportunity than others of noting the effect of this, find they can now walk over swamps which formerly were quite impassable; and if the practice be not checked in some way, these natural reservoirs for the supply of lower levels, will have their value most seriously impaired. Forests, especially those at the verge of the hills, should also be jealously guarded. Without touching on the question of whether forests attract rain, it is undoubted that, where they are removed, (as with the hardened swamps,) the rain that falls passes away, so to speak, at once; and is not retained; as under the opposite circumstances, in the soil, to pour or filter forth in a constant stream through succeeding months of drought.

Exd. J. Wright.

From J. ROHDE, Esq., to the Secretary to the Board of Revenue, dated Ootacamund, 8th April 1868.

1. I have the honour to acknowledge the Proceedings of the Board, dated 31st March 1868, relative to the question of water supply to residents on those hills.

2. The question appears to me to be one that can hardly be dealt with in a general way; rights that cannot now be questioned have in some cases been established; the supply of water by channels is no longer what it was; and very difficult questions would be involved in any attempt to re-distribute the existing supply.

3. Of course it will be optional with the Government to distribute any supply of water it may create at its discretion; but the simple mode then will be to charge for what is given. I believe the storing of the existing spring water, and its distribution by means of pipes, &c., would tend much to the economy of the water, and that this, if supplemented by leading existing streams to higher ground, would suffice for the ordinary wants of all; but sooner or later wells must be had recourse to for drinking water, and tanks for water for other purposes. I must say I do not think it the duty of Government to undertake the construction of either. Should a supply for municipal purposes be required, the Municipality are competent to the work, and in the case of individuals they can take care of themselves.

Exd. J. Wright.

From A. WEDDERBURN, Esq., Collector of Coimbatore, to the Secretary to the Board of Revenue, dated Ootacamund, 20th April 1868, No. 117.

1. With reference to the Board's Proceedings of the 31st March 1868, No. 2,354, I have the honour to state, that, for the future supply of water to houses and properties on the Neilgherry Hills, reservoirs, where practicable should be formed, and channels led from them, so as to command as great a range as possible, consistently with the water supply.

2. The reservoirs and channels should be made at Government cost; the water distributed by means of pipes of a certain diameter from the main channel, or by orifices in a brick sidework; as the channels would extend for miles, piping for them would be too expensive.

3. From a reservoir, water should be let on in full during the day, and partly shut off at night, when it would be less required. Household requirements should be first met, then sanitation, afterwards cultivation, whether ornamental or agricultural.

4. The cost of water to be charged according to volume measured by diameter of pipe or other outlet.

5. When parties are already in possession of a water supply, they can scarcely be called on to contribute; if the water supply be intercepted, or interfered with, an equal supply should be given without charge, as compensation, all extra or increased supply to be charged for, if applied for.

6. I have already inspected and countersigned a plan for the water supply of the northern section of Ootacamund, which I trust will soon be carried into effect, as water during the dry season is very scarce.

7. As regards jungle streams in more distant localities, they may be allowed to be utilized with the proviso that no private expenditure thereon is to be allowed to interfere with the future disposal of such water, by Government, for the general benefit.

Exd. J. Wright.

From J. C. HANNYNGTON, Esq., to the Secretary to the Board of Revenue, dated Ootacamund, 11th May 1863.

1. With reference to the Board's Proceedings, dated 31st March 1863, asking for my opinion with regard to the mode of dealing with applications for water supply from Government streams on the Neilgherry Hills, I have the honour to state my opinion—

1*st*.—With reference to applications in stations where a Municipality exists, the separate applications should be dealt with by the Municipality, which can make its own terms as to rates, &c., and should the point of the stream from which it is desired to divert water be beyond the Municipal limits, the case should be referred to the Chief Revenue Authority.

2*ndly*.—In cases beyond Municipal limits, each case should be dealt with separately by the Chief Revenue Officer, who will, of course, be careful that pre-existent rights are not interfered with, and that the value of adjacent lands *is not deteriorated*, &c.

2. Beyond the general rule, proposed by the Board in their letter of the 22nd February, I do not think that any fixed rules can be laid down with advantage.

Ed. J. Wright.

From Colonel G. W. WALKER, R. E., Superintending Engineer, Seventh Division, to the Secretary to the Board of Revenue, dated Coonoor, 15th May 1868, No. 42.

1. I have received, for transmission, the accompanying letters from Major Farewell* and Captain Law,† and beg herewith to subjoin my own opinion on the subject of the Board's Proceedings, No. 2,354, of 31st March.

* No. 16 of 20th April.
† „ 7 of 20th April.

2. It is, that no Government right should be reserved to the use of any water included within the actual limits of lands sold to private individuals. Where any stream is deemed of sufficient importance to be reserved, it should divide two otherwise contiguous Government lots, a margin of 100 feet on each side being further reserved. Access to Government water, though reserved, should be freely granted on application, subject to future limit on further demand arising, whether for public or private property; and each such demand to be treated on its individual merits. No proprietorship to any fixed share of water to be claimable simply because permission has once been obtained to enjoy such share; not even a preferential claim to be first served owing to position, if the water be required for public purposes. At present, channels are cut from public sources and led for miles through public ground by private individuals, who then assert an exclusive right to the water conveyed in them, and have actually been known to refuse a share for Government and public use. It appears to me that the firm exercise of Magisterial authority would check such abuses.

3. In the channels for general supply of water at Coonoor and Wellington, and in those proposed at Ootacamund, there is provided more than sufficient water for all parties; but to regulate their supply proportionably to their wants, small masonry works will be largely required. A fixed charge for conservancy and distribution will become necessary on works designed to supply a large station; say six pies monthly for each gallon of daily supply. More than half of existing supplies of water might be economized, and made available to private individuals, who require large quantities, and who will be at the expense of building cisterns of proportionate size, by filling such cisterns between the hours of 7 P. M. and 7 A. M, when to all intents and purposes the water at present goes to waste.

ENCLOSURE No. 1.

From Major W. FAREWELL, Executive Engineer, to the Superintending Engineer, Seventh Division, Coonoor, dated Ootacamund, 20th April 1868, No. 16.

1. With reference to your endorsement, dated 7th April 1868, on the Proceedings of the Revenue Board, No. 2,354, dated 31st March 1868, I have the honour to report, that what appears to me to be the most disturbing portion of the question of water supply to the properties on the Neilgherries is that many of the proprietors are under the impression that they have exclusive right to the whole of the water which may flow through their grounds, which they think nothing of diverting for any purpose that suits them, to the detriment of those properties below or beyond them; the water in almost every instance will be found to rise in Government land, and is therefore Government property. I beg, therefore, to make the following suggestions:—

1.—That all streams supplying more than one property, be formally taken possession of by Government; to allow of these streams being properly conserved and inspected, that a width of two feet on either side of them be reserved, so as to permit the channel establishment to have access to them, without being liable to be taken up as trespassers.

2.—That a fixed allowance be given to each dwelling, according to a scale, hereafter mentioned, and any diversion of water to a greater extent immediately be taken notice of by the Collector, and the parties concerned fined.

3.—To allow of the maintenance of a sufficient establishment for conservancy and distribution purposes, that each property be charged a water-rate of Rupees two (2) per mensem on houses renting from fifty Rupees to one hundred Rupees per mensem, and Rupee one per mensem, on houses renting from Rupees ten to Rupees fifty per mensem, native houses paying at the rate of two Annas per house per mensem.

4.—That all properties be registered, showing their water rent and the quantity of water apportioned to them.

5.—That each property renting from ten to one hundred Rupees and upwards per mensem be supplied with a masonry cistern of sufficient capacity to contain a day's supply according to scale, each cistern being supplied with a sluice, which can be opened or closed when required by the channel conservancy men.

Scale of water supply.

Monthly Rental.	Monthly Water Cess.	Number of Inhabitants.	No. of Gallons at 30 Gallons per head per diem.	Size of Cistern.
From Rs. 50 to Rs. 100.	Rs. 2	15	450	5′ × 5′ × 3′
,, ,, 10 to ,, 50.	Re. 1	10	300	5′ × 5′ × 2′
For every ten Native Huts.	As. 2 per Hut.	One Cistern.	300	5′ × 5′ × 2′

6.—With reference to water for garden purposes, that for actual general cultivation being out of the question, after all such cisterns as just noted have received their daily supply, providing always that the supply is adequate, separate cisterns of a size dependant on the water available, to be determined on by the Collector, might be built by such persons as may desire to have water for garden purposes at their own expenses, in such localities as may be convenient and approved of by the authorities.

2. Captain Law's letter on the subject of water supply is herewith forwarded.

ENCLOSURE No. 2.

From Captain G. V. LAW, Executive Engineer, Coonoor, to the Secretary to the Board of Revenue, dated Coonoor Sub-division, Neilgherry Range, 20th April 1868, No. 7.

1. In answer to the Proceedings of the Board of Revenue, No. 2,354, dated 31st March 1868, I have the honour to report that on the Church side of Coonoor, where the water channel is under my control, I have had no difficulty in satisfying the claims of all parties, whilst the water channel on the other or "Crimean" side of Coonoor, being in private hands, is a continual source of dispute, and annoyance to every one connected with it.

2. Where water is plentiful, our present system of small sluice gates to divert the water to the different sets of houses, with numerous cisterns and dipping places along the streams, acts admirably; but, where water is scarce, I would suggest that all houses should have their separate cisterns, which might be filled in rotation as often during each day as the supply of water would allow, with a few public cisterns constructed as drinking fountain at convenient places.

3. Finally, I would suggest that in all Municipalities the responsibility of the distribution of the water be vested in the Commissioners, and that our department should only have charge of such portions of water channels which (as in the case of the Coonoor water channel) run for miles before entering Municipal limits.

Forwarded, through the Executive Engineer, Neilgherry Range.

OOTACAMUND,
20th April 1868.

(Signed) W. FAREWELL, Major,
Executive Engineer, No. 1, Neilgherry Range.

Exd. T. Cartledge.

From N. A. ROUPELL, Esq., Acting Special Assistant Collector of Ootacamund, to the Secretary to the Board of Revenue, dated 20th May 1868, No. 6.

1. In reply to your letter, No. 1,325, dated 22nd February 1868, requesting my opinion as to how the question of supplies of water from the Government streams on the Neilgherries may best be dealt with, in the interests of the Government and of the public, I have the honour to submit the following information.

2. I would propose to consider this question first in reference to the Stations of Ootacamund and Coonoor, the frequent water disputes in which have chiefly given rise to this correspondence. In these stations, the present state of the water supply is very much as follows:—

The natural advantages of different localities have been turned, from time to time, to account by the owners of houses and lands in the vicinity. In some cases, Jungle streams flowed originally through private lands, and parties not content with helping themselves to the water as it passed by, took to damming up the streams and shutting off the supply from the lower levels. In other cases, the natural course of adjacent water has been artificially diverted. Last, but not least, for the majority of house-holders, water is procurable only from a spot beyond, and more or less distant from, their properties. Most of the streams have their rise in waste land, and are, therefore, the property of Government; but instances are common where private individuals have enjoyed the use of such stream-water for a great number of years. The result of the present unsettled state of affairs is simply to give room for disputes as to rights (many of them purely imaginary) to exclusive use of water, and, further, to contract the benefits derivable for the community generally from the quantity of water at hand within the smallest possible limits. What is now really required is, that Government should take in hand the question of water-supply, in the two stations abovementioned. In these stations, the inconvenience resulting from difficulty and expense in obtaining water is severely felt by a very considerable portion of the community; and it seems to me, that nothing short of some general scheme to provide for a sufficient supply of water for domestic and garden purposes should be set on foot without delay. Whether a supply should be given for general cultivation is a matter which had best be determined hereafter, the necessity for this not being sufficiently urgent to call for immediate attention.

3. I would observe with reference to Ootacamund and Coonoor, in which Act X. of 1865 has been put in force, that by Section 99 of the Act all public streams within Municipal limits are the property of the Municipal Commissioners. It is apparent, however, that the introduction of such a water-supply scheme, as would meet existing and contingent requirements, is far beyond the means of the Municipalities, with the limited funds at their disposal. It would seem, too, only fair, (and to this the Municipalities would, no doubt, readily accede,) that the Government should bear the cost of meeting a want which was felt long prior to the passing of the Towns' Improvement Act: a want, moreover, for which the Municipalities cannot be held responsible. I would here state my opinion that any schemes to which Government may see fit to give effect, including their practical daily working after completion, should be taken up as Government projects merely, and not with any idea of their being hereafter under Municipal management or control: though there would be nothing to hinder the adoption of the latter course, should it appear advisable.

4. To guard against the recurrence of previous disputes, as to the right of use of water, as well as to obviate the contingency of disputes for the future, and, further, to avoid divided responsibility for the proper care and use of the various portions of the proposed New Water-Supply scheme, it seems to me that a Channel Establishment should be employed by Government to look after, not merely such portions of the channels as pass through waste land, but such portions also as may lie within private holdings. For this purpose, stones should be placed, marking out as Government

property the land to a distance of one (1) yard from each bank of the channels. This would allow of the peons exercising proper supervision of the stream without trespassing upon private ground. The temptation to take every available drop of water, without regard to the requirements of others, seems to be so strong on these hills, and, I presume, elsewhere, that any arrangement which would allow of house and land-owners being answerable for the due custody, and proper use of the channels within their properties, the attention of the establishment being restricted to streams in waste land only, would certainly be a failure.

5. The question of the system upon which water should be supplied, is one upon which the local Executive Engineer will perhaps be best competent to form an opinion. I would suggest, however, that the taking of water out of the main channel should not be on any account permitted, but that each house and garden land should be supplied by a pipe leading from the main channel into a cistern, the size of the pipe and cistern being determined with reference to requirements. It would seem almost impossible to devise any satisfactory plan for giving each proprietor in the course of each day a certain quantity of water only, and then shutting off the supply. A better arrangement, as it appears to me, would be to attach near the top of each cistern a surplus-supply pipe, which would provide against the overflow of the cistern, by conveying the excess of water lower down into the stream from which it originally came. By this means the proprietor would always have a sufficient supply at hand, and, at the same time, any quantity in excess which might leave the stream would be again recovered.

6. As an argument in support of some such plan as that described above, I would here remark that one great difficulty in introducing a scheme of the nature of the one now under consideration, lies in providing a sufficient but not excessive supply of water to each holding, without the necessity for that close and constant supervision which would be only another name for espionage; a condition of things to be strongly deprecated, on account both of its tendency to irritate and annoy, and of the expensive channel establishment it would entail.

7. With regard to the system upon which water should be charged for, I am of opinion that the *spirit* of the standing rules relating to jungle streams should be applied in the two stations above mentioned. In this event, such persons as may be provided with an ample supply derived from natural streams flowing through their properties would be exempted from any payment. But should such streams form part of a main channel, it would be advisable that the pipe and cistern system, should here, as elsewhere, have place. The case of proprietors within the limits of whose holdings a spring way takes its rise would, of course, be in no way affected by the new general scheme. Again to proprietors who may be sufficiently provided with water obtained by the artificial diversion, by private outlay alone, of natural streams, the *spirit* of the rules above quoted should also be made applicable. From those to whom water is for the first time supplied, a cess might be levied proportionate to the gross annual rental. From those, again, who, at present, have insufficient streams flowing through their holdings, but whose supply, under the scheme to be adopted, may be increased to meet the demand, a rate might be raised corresponding with the advantages conferred.

8. Considering the Government quit-rent upon building sites, and assessment upon other lands, as well as the tax at 5 per cent. on the gross annual rental, at present charged under the Towns' Improvement Act, it cannot be expected that the amount laid out in introducing the new water-supply scheme will be recovered by local taxation. The utmost that can be worked for, appears to me to be the receipt of such a sum as will suffice to cover the cost of maintaining the supply channels in efficient order, and of paying the establishment connected therewith. Nor would it seem advisable to contemplate even this new charge, but for the consideration that great and permanent benefits must necessarily be the result of a good supply of water, and that to secure such benefits, people would pay ungrudgingly. A sum of from Rupees 1,000 to Rupees 1,500 would in all probability quite suffice, in Ootacamund, to meet annual establishment charges, as well as contingencies for keeping the main channels (should these be open and unfenced) in good repair. Such a sum might be raised in Ootacamund, by a charge of about one (1) per cent an annual rentals. It is here to be observed that almost every European household at present has to employ a waterman of from Rupees 5 to Rupees 6 per month, or from Rupees 60 to Rupees 72 per annum, while in numerous instances an additional waterman or even a Puckally bullock is found necessary. The pipe and cistern would bring the water close to the house or garden, and the charge proposed is one which, as above shown, would press the reverse of heavily.

9. I have confined my remarks hitherto to the two stations of Ootacamund and Coonoor, in which the want of some scheme which will supply water in sufficient quantities to all residents, put a stop to water disputes, and, generally, promote health and convenience, is most severely felt. Wellington being almost exclusively the residence of officers and others connected with the Government Military Depot, is rarely the scene of water altercations. I am under the impression that the supply there is not deficient. Kotagherry is so small a settlement, consisting of only twelve or thirteen houses, situated at considerable distances apart from each other, and water is so easily procurable by its residents, that no necessity exists, at any rate for the present, for any special scheme on its behalf. The careful demarcation and survey of the various properties there, now being carried on, will act as an additional preventive to disputes.

The case of jungle streams beyond the limits of stations seem to me to be fully provided for by the existing rules.

Lt. T. Cartledge.

Extract in the Rec of the B[oard] of Rev[enue] to the Lieut Gov[ernor] &c &c
dated 28 January 1669 No 592

NW 352/69.

Rec[d] 11 March 169 L L 306

Copies of papers referred to in the above Rec.

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