

**DOCUMENT NO. 109.**

**BOARD OF ALDERMEN,**

APRIL 21, 1834.

*The Committee on Fire and Water presented the following Report, enclosing Letters from D. J. Rhoads, Esq. and James Seymour, Esq. relating to supplying the City of New-York with pure and wholesome Water, which was read and directed to be printed for the use of the Members, and published in the Newspapers employed by the Common Council.*

J. MORTON, CLERK.

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The Committee on Fire and Water to whom have been sent the enclosed Letters, relative to supplying the City of New-York with pure and wholesome Water, from D. J. Rhoads, Esq. and from James Seymour, Esq. Civil Engineer, who has made a survey of the route from the Croton to Harlem River, respectfully

**REPORT :**

That, inasmuch, as no authority has yet been given to the Common Council in the premises, and your Committee deeming it proper that the public should know all the plans and

propositions relative to this all important subject—they recommend that this Report and the enclosed Letters be printed for the use of the Members, and also published in the Newspapers employed by the Corporation, for the benefit of the public generally.

Respectfully submitted,

JAMES PALMER,  
JOHN I. LABAGH,  
JAMES FERRIS,  
ABM. VAN NEST.

## To the Honorable Committee on Fire and Water.

*Gentlemen,*

I beg leave to inform you, that since my communication to the Honorable City Councils, proposing to introduce the Croton River Water into the City of New-York by contract.

In order to satisfy my friends and the public that I have not been mistaken in my former plans and estimates, I employed James Seymour, Esq. Civil Engineer, and his party, to make a survey of the grounds and to examine my estimates and plans—which has fully confirmed all my calculations and plans. I enclose you Mr. Seymour's communications to me on the subject; and also the following outlines of a contract I am prepared to enter into with the Corporation at any moment:—

1st. I will form a dam thirty-two feet high to control the Croton River, at a point about four miles above the Quaker Bridge, which shall not overflow exceeding one hundred acres of land.

2d. I will take the water from the pond formed by this dam and bring it to the Harlæm River, and there form a reservoir of capacity to hold three hundred millions of gallons; the elevation of which shall be one hundred and thirty-six feet above the tide.

3d. From thence I will bring the water across the Harlæm River, by pipes of cast iron, and discharge the same into a receiving and distributing reservoir, of capacity to hold two hundred millions of gallons, at the Manhattan Heights, not exceeding four miles from the City-Hall.

4th. The Corporation to pay all damages for water and land rights.

5th. Or I will agree to pay all the damages or cost of water and land rights, provided the Corporation will release to me all the surplus water, after supplying the City.

6th. The Corporation to pay me, for executing this work, the sum of seventeen hundred thousand dollars, payable when the work is done and finished according to contract. But in consideration that no payment is made until the work is completed, they shall allow me interest as the work progresses; and that all the work shall be under the general superintendence of a Croton River Water Works Committee, to be appointed by the Select and Common Councils of the City of New-York.

7th. The capacity of the canal shall be such that will pass thirty millions of gallons daily to the Harlaem River.

8th. It is to be understood, that the whole line of canal, excepting such parts as will require covering, is to be enclosed by an open fence, eight feet high, and gravel walks on the outer banks, similar to that enclosing the Fair Mount Water Works in the City of Philadelphia, and that the cost thereof is included in my estimate of seventeen hundred thousand dollars.

9th. The whole work shall be completed within three years from the date of the contract.

My plan for introducing water into your City is founded on the result of long experience and practical knowledge; and I am fully persuaded, that if New-York is to be supplied with good and wholesome water, they will adopt the plain, feasible, and cheapest plan which I have the honour to submit to the Corporation of the City of New-York.

Respectfully your obedient Servant,

D. J. RHOADS.

P. S. I disclaim every idea disparaging from the merits of others plans and estimates on the same subject, however much they may differ from me; I must say, however, that what has been termed equalizing reservoirs, if adopted, will not only be useless and dangerous, but calculated to retard the progress of the water.

D. J. R.

*New-York, April 18th, 1834.*

NEW-YORK, APRIL 18th, 1834.

*Daniel J. Rhoads, Esq.*

Dear Sir,

According to your instructions I commenced the survey and examinations for the purpose of supplying the inhabitants of this City with pure and wholesome water from the Croton River, on the 10th of February last.

I find head of water may be raised 155 feet above tide near Garretson Mill, on the Croton River, by erecting a stone dam of only thirty-two feet in height, at a point where the banks approach near each other, and not overflow more than one hundred acres of land, and that which is not of much value.

The flats in the neighbourhood Pine's Bridge will not be overflowed, inasmuch as the water will be kept within the banks of the Croton.

The waters of the Croton are the softest, purest, and the best that can be obtained in this part of the country, in sufficient quantities.

The proposed dam will be about five miles from the confluence of the Croton River with the Hudson, about three miles above Sing Sing, and at a place, to all appearance, formed by nature for the purpose of containing a body of water inexhaustible, for the supply of this City.

The line commences at the proposed dam, and after leaving the valley of the Croton River it passes near Sing Sing, Tarrytown, Greensburgh landing, and thence from the valley of the Hudson River to the valley of the Saw Mill River, from which it passes into the valley of Tibbet's Brook, and thence upon the East side of said brook to a point near Maccomb's Bridge, which crosses Harlæm River, on a regular uniform descent of half foot per mile, with the exception of the first, which is two feet, making the distance thirty-four

miles, and at an elevation of  $136\frac{1}{2}$  feet above tide at Harlæm River, and thence to a proposed receiving and distributing reservoir on Manhattan Island.

I have made a careful and minute examination of the route, and have made my estimate upon the following plan, proposed by yourself, for supplying this City with water.

1st. By constructing a canal (from the proposed dam across the Croton River) 10 feet on bottom, 8 feet deep, and sloping from 1 to  $1\frac{1}{2}$  to 1, to a point three quarters of a mile north from Maccomb's Bridge, with the exception of a part of the way, where a stone arch may be required whenever there is any danger of filth or any thing of that kind entering the canal, so that the water may be kept pure and clean, and thence to the proposed receiving and distributing reservoir on Manhattan Island by means of iron pipes.

I have no hesitation in saying, that your plan for supplying the inhabitants of this City with that beverage which is as necessary for long life as the air we breath, and that to without delay, both as it regards economy and the income which will be received by way of surplus water.

Upon this plan the whole of the Croton River may be taken, should it ever be wanted, together with the Saw Mill River and the Tibbett's Brook, at the points the line crosses them.

But without either of the two last-mentioned streams, the Croton River will afford a supply for centuries yet to come, and have surplus water to rent and sell, sufficient, in time, to extinguish the whole cost, and bring in a revenue over and above the revenue received from the City, which will be immense.

And, Sir, it appears unaccountable to me why this work has not been accomplished long before this time, and upon a plan so simple, plain, and practicable; when between twenty and thirty millions of gallons may be delivered daily into a reservoir on the north side of Harlæm River, near Maccomb's Bridge, which will contain three hundred millions of gallons, and at an elevation sufficient in height for any purpose what-

ever, and thence conveyed across Harlæm River, as above mentioned, into a receiving and distributing reservoir on Manhattan Island, which will contain two hundred millions of gallons, and done by its own gravity.

All of which may be accomplished for the amount stated in your proposition to the Common Council of this City, as you will see from the within closed survey and actual examination, together with a minute calculation of every part of the work, based upon data obtained from practical experience, which confirms your estimate and plans for the same.

Your humble Servant,

JAMES SEYMOUR.