City Document.—No. 4.

CITY OF BOSTON.

INTRODUCTION OF WATER.

CITY OF BOSTON.

City Council, January 29, 1838.

The Standing Committee on the introduction of pure and soft water into the city, having carefully deliberated upon the various important subjects which have been referred to them, ask leave respectfully to present the following

REPORT:

They believe the time has arrived when a decision can be made by the City Council upon the great question which has so long interested the public, with a full understanding of all the circumstances necessary for forming a judicious determination. The various reports which have been made on the subject, and especially the last able and comprehensive one by the three Commissioners appointed by the City Council of 1837, convey the most valuable information upon the

quality and quantity of water to be obtained from various sources, and the probable expense of its introduction into the city, and distribution to the inhabitants. These, in addition to the facts in relation to the ownership of the water, and the mill privileges connected with it, are sufficient to enable the Council to act promptly yet wisely; at least, it seems probable to the Committee that few, if any important facts can be expected to be developed by longer delay.

There is a preliminary question, however, which must be decided on other considerations, and on which, notwithstanding some diversity of opinion both in the Committee and out of it, the majority entertain decidedly the views which they believe are also held by the majority of their fellow citizens abroad. The question is whether it is expedient for the city to undertake the work, or to entrust the execution of it to a private company, with the privilege of purchasing their rights whenever it should be deemed expedient. On this point the Committee entertain no doubt that it is best for the city to execute the work by its own agents, and to have the control and superintendence of it from its commencement to its completion. They believe that it is too important a business to be suffered to be affected by the calculations of private interest, which it is certainly possible might be injurious to the permanent character of a work which ought to be begun with reference to the future wants of a great and growing city. If, in order to prevent this evil, it should be stipulated that the work should be done to the satisfaction of agents appointed by the city, there would be another danger, viz: of collision between different interests, and of delay in

the prosecution of the business which, if undertaken, ought to be completed as speedily as is consistent with the durability of a structure designed for the benefit of posterity as well as ourselves. Another reason why the city should undertake it, independently of all private interests, is that the expense of the operation to the community would be less. Should the city have the privilege of purchasing, if they should find it advisable, it would probably be on the usual condition annexed to such privileges, of paying ten per centum per annum on the investment. But if the city perform the work, they can, without question, obtain the money at five per centum per annum; and thus, if at the end of ten years the city should purchase the works, it would be at a loss of five per cent. for ten years on the cost, which whether paid by the one corporation or the other, would probably not fall far short of a million and a half of dollars. In ten years, therefore, the work may cost the city $750,000 more, if performed by a private corporation than if done by itself. If it should prove possible to accomplish it for less money, still the argument is valid in proportion to the amount actually expended. But it may be contended that it may never be necessary to purchase the rights of the corporation. In that case, the citizens would be always liable to a higher rate of taxation than the city would charge; as it is not to be supposed that a private corporation would supply the necessary quantity at as liberal a rate as the city, who can have no other interest than to provide the water at as low a charge as will cover the necessary expenses.

If then it be thought expedient for the city to ex-

ecute the work, the next question which arises is from what source the water shall be taken; and on this subject also, the Committee have formed an opinion, after much examination and deliberation. They agree with the majority of the Board of Commissioners, that the best and most sure source of supply will be found in the combination of Spot and Mystic Ponds; and in addition to the considerations so ably urged by them, the Committee will suggest the following. The extent of Long Pond is stated to be six hundred acres, while that of Spot and Mystic, and the other ponds which empty into the latter, together with the additional basins which may be created by a proper disposition of dams, will exceed that amount by nearly 200 acres.

The present extent of Spot Pond is	283	acres.
To this may be added an artificial basin of	60	"
Mystic Pond covers	228	"
and by raising a dam at its outlet, of three or four feet, (which will be necessary to exclude the tides) an extent of low lands will probably be overflowed amounting to about	100	"
Horn and Wedge Ponds, which empty into Mystic Pond, and may therefore be considered as an additional basin, cover	123	"
Making a total of	794	"

Another reason which induced the Committee to prefer Spot Pond to Long Pond, as a principal source of supply, is that it is 19½ feet higher above tide water, and ten miles nearer to the centre of the city. Long Pond is 123½ feet above high tide, and 18 miles

distant. Spot Pond is 143 feet above tide and 8 miles from City Hall. From Long Pond to Corey's Hill, on which the reservoir is to be placed, is something more than 15¼ miles; and as the aqueduct to bring the water must be of brick or stone, it is necessary that it should go on a gentle descent all the way. This will render the height of the reservoir above high water less by several feet than that of the pond, and though the difference between the height of that reservoir and the one on Beacon Hill may be sufficient to overcome the friction of the water on the pipes, and raise it to the requisite height, yet the advantage of having 20 feet greater head is not inconsiderable. The security of a brick or stone conduit, also, which must be carried for some distance over fresh embankments, and which may be liable to the percolation of surface water, cannot be regarded as equal to that of iron pipes, which may follow the general direction of the natural surface of the territory over which they pass.

Another consideration, which was of great weight with the Committee, was that the amount of damage which would be done to the water rights on the outlets of Spot and Mystic Ponds, or which would arise from flowage, would be easily susceptible of estimate by impartial persons, and might therefore fairly be expected to be mutually agreed upon between the city and the proprietors; while the amount of damage done to the various mills situated on the outlet of Long Pond, and on Concord River, which is in great measure supplied from this pond, and to the Middlesex Canal which draws much of its supply from the same source, it would be very difficult, if

not impossible, to determine; and we should have reason to apprehend, therefore, that we were entailing on our posterity a long series of harrassing lawsuits, together with the water with which we furnished them. The Committee cannot think that the sum of $110,000 which the Commissioners have named as the probable amount of damage from this source, would cover all that might be expected to arise from it; nor do they believe that it will be possible to make any thing more than an approximation to the sum that might be required.

There is an advantage, which will not escape the City Council, in deriving a supply from two sources, neither of which is indispensable, over drawing from one alone. In the latter case, the city is placed more at the mercy of the proprietors, and those who suffer damage than in the former, and the danger from an occasional drought is greater. The difference in the distance from Long Pond, and from Spot Pond to the city, occasions a difference, not merely in the cost of construction, which is exhibited by the Commissioners, but in the liability to accidents, which in a business of such vital importance as the supply of a necessary of life to a large city, is a consideration of no trifling importance. The distance from Spot Pond being only one half of that from Long Pond, the danger of any interruption to the supply from accidental causes is diminished in an equal ratio. A great objection in the minds of many persons, to taking any portion of the supply from Mystic Pond, is the necessity of pumping it into a reservoir. Steam power, they think, must be resorted to, and the expense and liability to accident from this cause are so great as to

be considered an insurmountable objection. Allowing its full weight to this consideration, the Committee are still of opinion that it is entirely a question of expense, as the security can be made ample; and it must therefore be compared with the expense of other operations by which the city may be supplied. It should not be omitted, also, that the use of iron pipes, if the supply be taken from Spot and Mystic Ponds, prevents the danger of the water being impregnated with the lime, which is a component part of the hydraulic cement in which the aqueduct must be laid, from Long Pond to Corey's Hill. The danger is not trifling that the water would be seriously injured from that cause for many years.

Having thus stated their views as to the two points of the mode in which the work should be done, and the source of supply, the Committee come to the question of the time at which it should be begun; but as they have not been called upon to give particular attention to this subject, they cannot pretend to have formed any more valuable opinion upon it than other members of the City Government. They believe that the financial embarrassments, which will occur to every mind as a plausible objection to an immediate beginning, are nothing more than temporary evils; and they perceive no better means of alleviating the distresses of those who depend upon labor for support, than by furnishing them with employment. The interest of the amount spent by the city on this, or any other valuable improvements, will be no intollerable addition to our burdens; while the good done by the money can scarcely ever be greater than at the present time, and the economy which may be

now practised in the expenditure is not likely to be exceeded at any future period. At the same time, the want of the supply of water is strongly felt, and will not fail to increase in urgency. The Committee cannot but express the hope, therefore, that no apprehensions arising from the temporary troubles of the times will prevent the Council from beginning a work of such incalculable advantage to the city through all time.

Application must be made to the Legislature for the powers requisite to enable the city to perform the operation, as is stated in the subjoined reply of the City Solicitor to a question on this point proposed by the Council; and the Committee have great pleasure in stating that no obstacle will be opposed by the Hydraulic Company, incorporated in 1836, to any such application by the City, but on the contrary, every facility will be given by that corporation in furtherance of the wishes of the City Council. In conformity with the views here expressed, the Committee ask leave to submit the following resolves and order.

For the Committee,

SAML. A. ELIOT.

Resolved, That it is expedient for the city to begin and complete the necessary works for the introduction of a supply of pure water.

Resolved, That it is expedient to draw the supply from Spot and Mystic Ponds, in the manner recommended by the majority of the Commissioners.

Resolved, That it is expedient to begin the work as soon as the necessary powers can be obtained from the Legislature.

Ordered, That the Standing Committee on the introduction of water be instructed to make immediate application to the Legislature, for the grant of such powers to the city as may be necessary for the introduction of a sufficient supply of water.

Hon. Samuel A. Eliot, *Mayor*.

City Solicitor's Office,
January 22, 1837.

Sir,

I have received your letter communicating a vote of the City Council, in which an inquiry is made—"Whether or not it will be necessary to apply to the Legislature for additional powers to enable the city to construct works on either plan proposed by the Commissioners, or some other source."

In answer to this question, I am of opinion, that under the municipal powers now granted to the city by the charter, the city has not authority to provide for the introduction of pure water in the manner which is understood to be in contemplation by the City Government; and, therefore, that it would be necessary, for that purpose, to obtain further powers from the Legislature.

I am, sir,

Your obedient servant,

JNO. PICKERING, *City Solicitor*.