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# The Sentinel.

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# THE WATER WORKS QUESTION.

The Town Council have had printed, for the information of our townpeople, a number of copies of the report made at their instance by N. Henry Crafts and Arthur W. Forbes, Civil Engineers of Boston. The wisdom of the Council in going abroad to secure a survey and report is apparent; there can be no suspicion of local prejudice or partiality coloring the report.

Turning to the document under discussion, the Engineers first refer to previous surveys. They then in a few terse paragraphs present a comprehensive argument in favor of the establishment of water works, which we believe to be logically unassailable, and being so should have due weight with the rate-payers in their conclusion. The Engineers say:

"The question of water supply, then, is not a new one to your people, and the experience you have had from the ravages of fire ought by this time to have thoroughly aroused all citizens to the importance of the necessity of an efficient public water supply, as a protection against fire, if not for other reason."

The experience of every Municipality that has introduced a good and efficient supply of water has invariably been—

(1) A more or less prolonged contest between the friends and opponents of the measure, a contest wherein personal interest, selfishness and cupidity form the chief elements of the opposition.

(2) A victory at last for those who have fought for one of the greatest and best public improvements.

(3) The water once introduced, every one wants it, every one takes it, every one enjoys it, every one does without it; and even the wealthy, considering the expense of the fountain and for sprinkling lawns, pay their bills without grumbling, and are willing to have the past forgotten and forgiven.

We deem it necessary, therefore, to present any further argument upon a question so fully and completely answered by experience; but will proceed to consider the general subject of public water supply for your Town under the following heads:

Here we remark that a reasonable opinion can only be presented and respected if it is able to controvert the conclusion submitted by the Engineers. Proceeding, the report presents—

1. The general features which constitute a good and efficient water supply.

2. A description and analysis of the several schemes with approximate estimate of cost.

3. A comparison of the relative merits of the different schemes, with deductions and recommendations.

I. GENERAL FEATURES.

This portion of the subject may be subdivided and classified as follows:

(a.) Quality of the water, present and prospective.

(b.) Quantity required, present and prospective.

(c.) System of works.

The discussion of the several topics embraced in the foregoing classification may be properly embraced in the general statement that a good and efficient system of water works is one where the water is soft, pure and wholesome to such a degree as to render it palatable, healthful and well adapted to use in all branches of industry, and it should be obtained from a source that is reasonably free from the possibility of future pollution. In quantity, use and prospective, it should be ample for all the purposes of the household, for all branches of industry, for arboriculture or horticulture, for the domestic use of the public, such as for fountains, baths, sprinkling streets, &c. The storage facilities should be such as to preclude the possibility of a failure of the water supply as often as it is demanded at an elevation sufficient to carry it above the top of the highest houses; and the general arrangements of the pipes, gates and hydrants should be such as to insure, at any point in your city, a flow equal to the demands of three steam fire engines, in addition to the ordinary use of the water for domestic and miscellaneous requirements.

We need not quote at length the exhaustive arguments on "quality" which reach the conclusion that—

Natural lakes or ponds of considerable depth, with sandy bottom and a pure and clean surrounding furnish the best and purest water.

And that large and constant flowing rivers rank next in point of purity of water.

Under the heading "Quantity" the report says:

In selecting a source of supply and planning the more permanent parts of the work the standard should be liberal, and for your town 60 gallons per head per day ought to be considered as bordering upon the extraordinary. However, we think it best to use this as a standard.

The present population of Woodstock is, we are informed, about 3,000. Allow a decimal rate of increase of about twenty-five per cent., and the population will double in a little over thirty years.

The present daily requirements, supposing all the population to be supplied, will be 180,000 gallons. At the rate of 20 per cent. increase it will be 216,000 gallons. At the end of 50 years it will be 500,000 gallons.

In planning the works for your Town we have arranged the following as the minimum amount for a daily supply of 500,000 gallons per day for ordinary daily use, and an additional temporary supply for fire purposes equal to the demand of the three steam fire engines when running their full capacity.

The report next discusses the various systems of works, but as the Town Council have declared in favor of one of the schemes presented, and as, doubtless, that declaration will be approved generally, it will be our duty to print the details of that scheme, which is No. 3.

SCHEME NO. 3.—SUPPLY FROM RIVER ST. JOHN BY THE DISTRICT SYSTEM OF PUMPING.

In our surveys and examinations the river was found to be the best source of supply, and the best location for the pump works under the reservoir system. The old Ferry Wharf was many accounts deemed the most eligible location; but the shallowness of the water at extreme low water led us to make further examination, and it was finally decided to locate at the upper end of the old Steamboat Pier, a little south of the foot of Regent street, as shown in plan above referred to.

The arrangement of the pump works will be substantially the same as under the reservoir plan, except there will be a reserve of machinery and a different style, adapted to direct pumping and for high-pressure fire service.

The distribution system will cover the same ground as under the reservoir plan, but the arrangement will be different and the sizes smaller owing, in part, to the central location of the Supply Works; but in a greater degree, to the fact that the direct system affords an unlimited pressure for emergencies, while the reservoir plan the pressure is limited to the height of water in the reservoir.

The plan of distribution under this scheme

is shown on the plan referred to and may be described as follows:

From the Pump Station a 10 inch main is carried to the foot of Regent street, thence through Chapel street to Main street; there in Main street, at the intersection of Chapel street, the main is connected with the Main street and Broadway. Here two branches are taken off one extending through Main street as far as George street, the other in Broadway as far as St. Gertrude street. The south side circuit is then completed by extending a 6 inch pipe through Broadway to Houston road to Main street, and back through Main street to connect with the 10 inch pipe at George street.

Connected with this circuit line are the following branches:

To Main street, from Houston Road to the

Tannery, a 4 in. line

George street—Main to Broadway, a 4 in. line

St. William street—Main to Broadway, a 4 in. line

St. Gertrude street—Main to Broadway, a 4 in. line

St. Gertrude street—Main to Broadway, a 4 in. line

St. Gertrude street—Main to Broadway, a 4 in. line

St. Gertrude street—Main to Broadway, a 4 in. line

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