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SAULT STE. MARIE WATER SUPPLY PROJECT

Present Source Badly Polluted and Filters Must Be Installed or New Supply Obtained—Investigation of Five Possible Schemes Favors Gravity Supply From Coldwater Creek—Brief Abstract of Some Portions of Report Just Made to the Sault Ste. Marie Water Commissioners by

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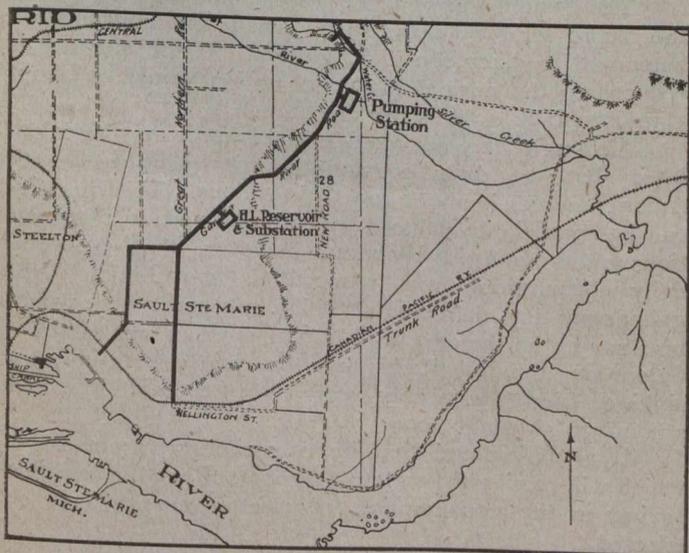
WATER was first supplied in 1887 by the Sault Ste. Marie Water, Gas and Light Co., and after vicissitudes the works were taken over by the town in 1890. In 1895 they were disposed of to the Tagona Water, Light and Power Company, and in 1914 the city re-acquired the waterworks system.

The present pumping station forms a part of the Great Lakes Power Company's hydro-electric power house, and as large extensions are now being made thereto it was necessary to dismantle and remove the water-driven Northey horizontal duplex pump. In its place has been installed at the other end of the power house and near the steam fire pumps, an electric-driven centrifugal pump having a water capacity of about three million U.S. gallons per day.

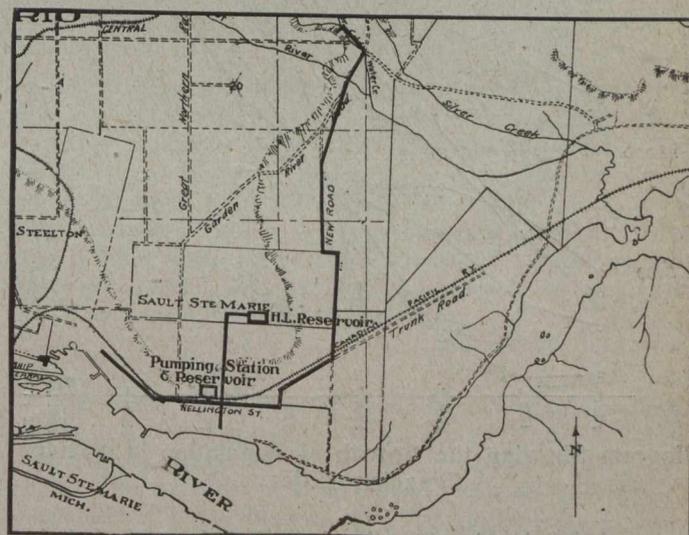
There are also three steam-driven horizontal duplex fire pumps, one having a capacity of about 1,200,000 U.S. gallons per day and two each of about 1,320,000 U.S. gallons daily. The normal station water pressure is about 80 gallons per square inch, and a fire pressure of 110 lbs. per square inch. The pressure at the Queen Street fire hall is about 70 and 100 lbs. respectively. The Lake

2 penstocks with an emergency connection to the ship canal by means of a wooden pipe connected to a 5-ft. branch of a 7-ft. steel pipe fed from above the upper lock.

These have been removed and water is now taken from Penstocks Nos. 4 and 6 and from the tail race. A



Plan of Coldwater Creek Pumping Scheme.



Plan of Coldwater Creek Gravity Scheme.

new 16-inch steel main will be laid to re-establish the connection with the ship canal.

The water taken from the power and ship canals, as shown by several investigations, is unsatisfactory in quality. It is inevitable under the circumstances which obtain in the neighborhood that undesirable matter and liquid from shipping, works, operations and surroundings, will continue to be discharged into the canals. Moreover, the power canal is being much enlarged, and the connection to the river above the C.P.R. bridge has to be dredged, when mud, debris and filth will be scoured by the current, and carried towards the intakes, and in this manner render the water unfit for use. During the dredging operations water will be taken from the ship canal, but as ships move to the bollards near the upper lock and discharge refuse close to the intake it will be seen that the quality will be polluted during the navigation season.

Having regard to the present situation, there can be no doubt that whilst the arrangements may be as good as can be made under the existing circumstances, the supply of water is unsatisfactory in quality, somewhat precarious to obtain and expensive to operate. The only

Superior Pulp Co. supplies steam at about 80 lbs. pressure through pipe from an adjoining building.

Owing to the extensive alterations it has been necessary to rearrange the suction and delivery mains at the pump station. The intakes were formerly at Nos. 1 and