

of the water; this is to reduce the number of main breaks resulting from cold weather. In warm weather, well water is added to bring down the temperature of the surface water and to assist with nitrification issues in the system.

Water from the river and lakes eventually reach Vadnais Lake. Two 90-inch conduits connect Vadnais Lake to the water treatment plant 4.4 miles to the south. Along the way, water from the wells can be added.

Together, the conduits are capable of conveying water by gravity at a rate of 200 million gallons a day. Valves are used to regulate the amount of water actually entering the treatment plant. The use of gravity saves a great deal of electrical energy every day. One of

Once the water is pumped out of the Mississippi, no further pumping is required until the water leaves the treatment plant.

Additionally, the quality of the water supply is excellent.

The Mississippi River, where most of the supply is obtained, is subject to wide variations in quality. If its water were pumped directly to the treatment plant, these fluctuations in quality would present difficult and costly treatment problems.

However, as the water is passed

