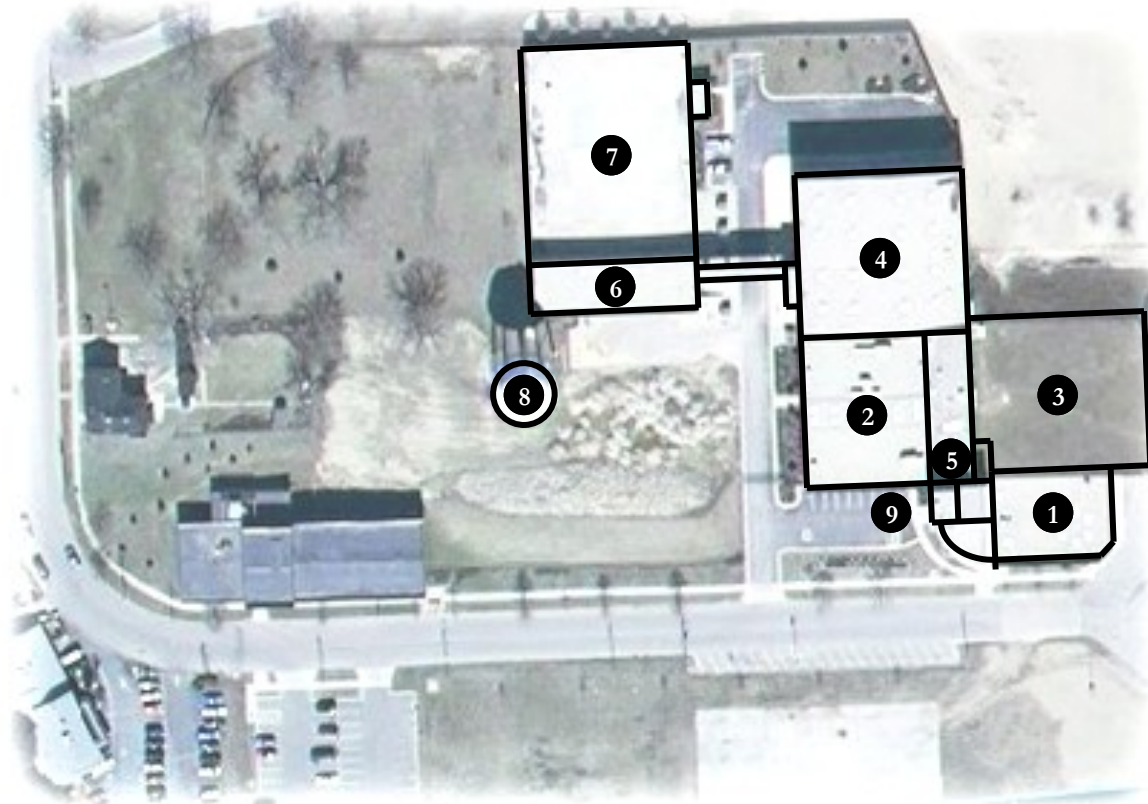




**Water Production Plant**  
100 51st Place, Kenosha, WI



- |                     |                      |                          |
|---------------------|----------------------|--------------------------|
| 1. Low Lift Pumping | 4. Microfiltration   | 7. Storage Reservoir     |
| 2. Sand Filtration  | 5. Main Control Room | 8. Wash Water Tank       |
| 3. Settling Basins  | 6. High Lift Pumping | 9. Waste Wash Water Tank |



**Kenosha Water Utility**  
**Water Production Plant**



**"Providing and Protecting Kenosha's  
Greatest Natural Resource ... Water"**



## History and Administration

The Kenosha Water Utility was first formed back in 1894 when the City of Kenosha authorized Mr. Isaiah Newcomber to construct, operate and maintain a lake system of water supply to the City of Kenosha. At that time, the Utility's entire equipment inventory consisted of a small pumping station containing two small pumps, two steam boilers and a 24-inch water intake extending 5,000 feet into Lake Michigan. By contrast, today's Water Utility employs more than 80 people, who are responsible for operating and maintaining water production and distribution facilities in addition to wastewater collection and treatment facilities. Today, the Utility operates out of three separate facilities: the Water Production Plant located on Simmons Island; the Wastewater Treatment Plant located near Southport Beach; and the Water Centre (Business Center) located off of Green Bay Road. Additionally, the Utility has numerous water storage and pumping facilities located throughout the entire city.

Except for public ownership, the Utility is fiscally independent from the City of Kenosha. In other words, all revenues required to cover the Utility's operating expenses are derived through user fees and not tax revenues. Major capital improvement projects are financed by the sale of water or sewer

revenue bonds. The Kenosha Water Utility is a public utility and therefore must remain in strict compliance with the rules and regulations set forth by the Wisconsin Public Service Commission.

The entire charge, management and property of the Utility are vested with the Board of Water Commissioners. Six aldermen for the City of Kenosha are appointed by the Mayor to serve on the Board of Water Commissioners. The Board in turn appoints a General Manager to manage day-to-day Utility operations. Since the Utility's formation in 1895, only 11 people have had the privilege to serve as General Manager. The longest serving General Manager was Mr. O. Fred Nelson, who served as General Manager for 42 years.

## Kenosha's Water Supply

Kenosha's unending supply of water is taken entirely from Lake Michigan through 42-inch and 48-inch intake pipes that extend nearly one mile into the lake. All of the Great Lakes combined are estimated to contain six quadrillion gallons of water, making up 95 percent of the fresh water supply for the United States and 20 percent of the fresh water supply for the entire world. In recent years, States and Canadian Provinces surrounding the Great Lakes have joined forces to ensure that this invaluable natural resource is preserved and protected long into the future.

The quality of the raw water taken from Lake Michigan is naturally very high; however the Utility employs failsafe, state-of-the-art equipment to further process the water to an exceptional level of quality. The most remarkable pieces of equipment used by the Utility are the microfiltration units. The photograph on the right depicts one of these units in operation at the Water Production Plant. Each of these units is made up of several water filtration modules. Each module contains thousands of tiny hollow polymeric fibers which are bundled together inside the

module. Raw water is filtered by passing through the fibers which contain millions of small pores. Filtering occurs because the membrane pores are large enough to allow water to pass through, yet small enough to restrict the passage of undesirable materials such as particulate matter and pathogenic organisms. Additionally, the Utility uses sand filters in parallel with the microfiltration units to filter the raw water. Water deriving from each filtration process is blended together to produce finished water that is exceptionally clear and extremely safe to drink. Before being pumped into the distribution system, the water is chlorinated and a small amount of fluoride is added to the water to help prevent dental caries.

The water distribution system comprises more than 345 miles of water main, including 5,429 line valves, 3,115 fire hydrants, and 28,859 active service connections. The Utility has the ability to store 17.5 million gallons of water in nine water storage tanks situated throughout the distribution system. Approximately five billion gallons of the world's finest quality water are delivered to customers each year, equating to approximately 100 gallons of water per day for each person.



**Microfiltration Equipment**