

# Introducing Walkersville's New Water Treatment Facility!

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The Town of Walkersville was concerned with the age, conditions, and operability of its water treatment plant located adjacent to the Public Works Facility. The original plant was over 45 years old and utilized pressure filtration, Ion Exchange Nitrate removal, Ion Exchange softening followed by disinfection. These older technologies use a significant amount of salt and add Sodium to drinking water. With the new facility up and running since the beginning of July, we have decided to do things differently to exceed Walkersville's water expectations.

There were numerous issues with the old plant. The salt bins, brine system for the nitrate removal, and softener units were in poor condition and had been a continuous maintenance problem for the Town. The filtration and ion exchange equipment were near their typical useful life cycle of 30 to 50 years. Some of the vessels had been repaired several times for leaks. The valves and instrumentation were outdated and had exceeded their useful life. Despite Town's continuous maintenance, excessive corrosion, and rust on the piping and treatment tanks were reported, which indicated they were near the end of their useful life.

The Town evaluated several options including upgrade of the old plant and building a new facility and decided to go with building a new advanced water treatment facility to address future demands and more stringent water quality regulations.

The basis of design for the new plant was established to pump out 1.0 Million Gallons per Day (MGD) and 1.5 MGD in the month of maximum use. This flow demand was viewed to be good for the next 30 years.

The new facility is an Integrated Membrane System (IMS), one of the first drinking water IMS in the State of Maryland, consisting of pretreatment for protection of membranes, Microfiltration (MF) for turbidity and pathogens removal, Reverse Osmosis (RO) for reduction of Nitrate and hardness, Chlorine primary disinfection, UV secondary disinfection, Fluoridation and post pH adjustment.

The finished water hardness has been very consistent in the 80-100 mg/L since the new plant came online. Water quality meets and surpasses all state and EPA requirements.

The decision to remove in-home softeners is not the Town's decision. It is up to consumers. We don't recommend the Town dictating or making a decision for the consumers.

In order to cost-effectively meet and surpass the Safe Drinking Water Act (SDWA) water quality requirements, typically, 25 to 30 % of the filtrate from the MF is bypassed around the RO to reduce O&M costs and minimize chemical usage for pH adjustments. The current blend ratio is set at 28%, which will result in 90-100 mg/L of hardness and Nitrate levels of 2-4 mg/L, well below EPA maximum standard of 10 mg/L.

Since July 8th, the Water Treatment Plant has been successfully operating without any issues, meeting and surpassing all requirements and expectations.



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Talk Of The Town**