THE FINAL BARRIER

The Challenge: Throughout the United States, communities are increasingly impacted by the presence of contaminants in their drinking water. This can result in adverse health effects. Some common causes of water contamination include:

Industrial & Manufacturing
Applications: Contaminants including PFAS, Chromium-6, and Personal Care Products & Pharmaceuticals

Agricultural Runoff: Dumping of products and local land use practices such as fertilizers and pesticides, resulting in higher nitrate levels

Naturally Occurring Chemicals: Contaminants including Arsenic, Radon, and Nitrates

Outdated Infrastructure: Such as lead service lines or malfunctioning on-site wastewater treatment systems

Regardless of the conditions, the underlying challenge with drinking water contaminants is that just because the water looks clean, it does not necessarily mean that it is safe to drink. Many of these contaminants are odorless, tasteless, and even colorless. This can be exacerbated through natural events such as floods and drought.
The Solution: The most important step to addressing harmful contaminants is testing one's drinking water. Before properly remediating contaminants, one must be able to understand the contamination level and the chemical composition of their drinking water. Point-of-Use (POU) and Point-of-Entry (POE) devices are key systems that utilities, households, and the public can utilize to effectively treat their drinking water. Some of these include: Pour-through Pitchers; Countertop Units; Faucet-Attached Devices; Under-the-sink Filters; Refrigerator Filters; Reverse Osmosis Systems; Distillation; Water Softener; UV Treatment Systems.

**Point-of-Entry (POE)** is a water treatment system installed at the main water line for an entire building or home.

**Point-of-Use (POU)** is a water treatment system designed for a single tap.

**Standards for Water Treatment Systems**

**NSF/ANSI 42:** For the reduction of aesthetic impurities such as chlorine and taste/odor.

**NSF/ANSI 44:** Applies to water softeners that reduce hardness through cation exchange resin such as sodium or potassium chloride.

**NSF/ANSI 53:** Designated for filters that are certified to reduce a contaminant with a health effect. Health effects are set in this standard as regulated by the U.S. EPA and Health Canada.

**NSF/ANSI 55:** Ultraviolet (UV) treatment systems use UV light to inactivate or kill bacteria, viruses and cysts in contaminated water (Class A systems) or to reduce the amount of non-disease causing bacteria in disinfected drinking water (Class B).

**NSF/ANSI 58:** Reverse Osmosis (RO) systems incorporate a process that uses reverse pressure to force water through a semi-permeable membrane. These systems reduce contaminants that are regulated by U.S. EPA and Health Canada.

Through WQA Professional Certification and State Licensure Programs, the public can leverage local water treatment professionals to test their drinking water. A water treatment professional can assess appropriate and cost-effective options for each individual application.

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