

How Does It Work?

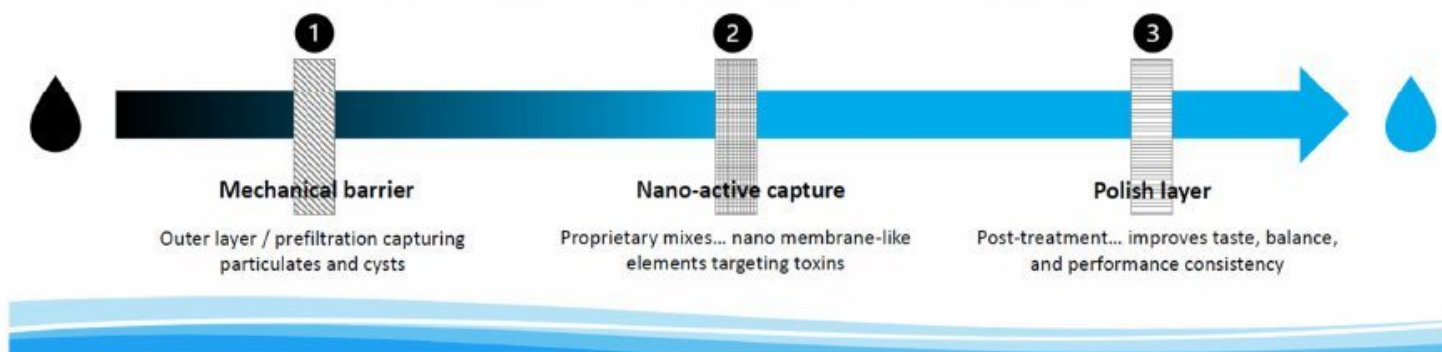
Proprietary Nano-Based Filtration: Engineered for Absolute Purity

Removes harmful contaminants with unmatched efficiency and zero wastewater.

CleanWater's nano-engineered membranes deliver extreme purification without pressure loss issues or wastewater.

- Multi-stage nano-filtration removes >99.99999% of bacteria and >99.9999% of viruses (6-7 log reduction).
- Third-Party tested and in compliance with NSF 53 for PFAS, PFOA, and PFOS removal.
- Removes heavy metals, pesticides, microplastics, and pharmaceuticals.
- Zero-wastewater – unlike reverse osmosis (RO) systems that discard 50-80 % of input water and reduce flow pressure.
- Scalable design – from under-sink units to high-volume industrial applications.

Constant Pressure Flow — No pumps, no tanks, no performance loss.

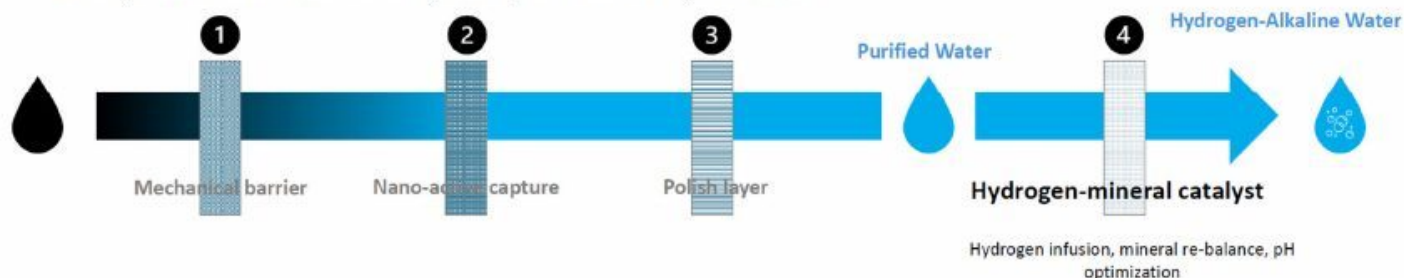


Hydrogen - Alkaline Enrichment: Water That Supports Wellness

Adds beneficial minerals and molecular hydrogen to promote balance, hydration, and vitality.

CleanWater's nano-engineered membranes deliver extreme purification without pressure loss or wastewater.

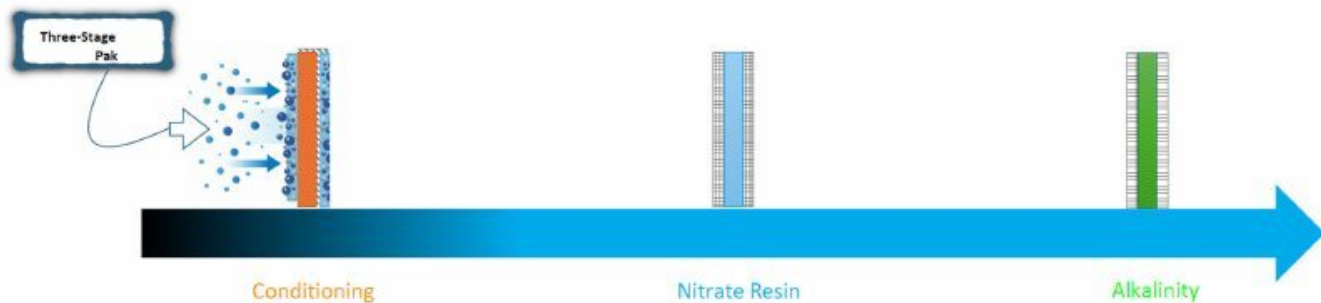
- Mineral-release layer reintroduces calcium, magnesium, and trace elements to restore natural balance and improve taste.
- Hydrogen-infusion catalyst generates molecular H_2 , helping neutralize oxidative stress and enhance cellular hydration.
- Optimized pH (8-9) creates alkaline balance without over-mineralizing or altering mouthfeel.
- Combined filtration + enhancement delivers both safety and functional benefit in a single cartridge.
- Designed for consistent mineral delivery and no pressure loss during enrichment.



Proprietary Nano-Based Filtration: Targeting unique pathogens/enabling slow release

Proprietary Modifications made to the filtration Enables Technology. This is only possible due to the high capacity and low pressure attributes of the nano pleated substrate.

- Stage One - allows surface modification of each filter via mechanical filtration to be able to adsorb unique contaminants.
- Stage Two - allows unique resins/sorbents to be placed in the return core each filter. Also allows slow release of disinfectants, softening resins, pH adjustment resins, nutrients, etc.
- Stage Three - conditions and boosts the water's alkalinity



Adds minerals and micro-nutrients

Whole-Home Water. Re-engineered.

Designed for Municipal and Well Water Supply

The Facts

- 99.9999999% bacteria removal (>9 LRV*)
- 99% reduction of heavy metals (97.2% lead reduction)
- 95% reduction of PFAS (forever chemicals, PFOA/PFOS)
- Anti-scale filter to treat hard water
- No water softener needed
- No heavy bags of salt
- No salinized wastewater
- Reduces the scale buildup on faucets, cookware, appliances; leave good minerals in water
- Particulate reduction down to 20 nm.

Step 1 - Uses a multi-faceted filter, removing particles - greater than 5 micron. Simultaneously conditioning the incoming water, eliminating calcium carbonate – no more spots when cleaning, dishes, silverware. Your pipes will last longer. This filtration process extends life.

Our next stage filters sediment. Water is conditioned so glasses and faucets remain spotless.

Step 2 - Uses our proprietary filter to remove bacteria, viruses, cysts, spores, and other pathogens. Engineered with an activated carbon with a high surface area paper. This reduces pathogens, pesticides, pharmaceuticals, forever chemicals (PFOA/PFOS), and heavy metals (including lead). We incorporate advanced antibacterial particles, preventing the filter from biofouling.

Step 3 - Stage 3 is the Final polishing of PFOA/PFOS, lead, chlorine, pesticides, and other contaminants; using a high-capacity carbon filter. This improves taste and smell of water. Our carbon will outperform similar carbons due to the purity of water at this step of the process.

Zero-Waste Filtration: Environmental Innovation at Its Core

CleanWater products reduce plastic waste, conserving water through high-efficiency design.



PURIFY

Zero-Wastewater Performance

- Uses 100% of input water with no wastewater discharge.
- Avoids the 50–80% water loss seen in typical RO systems.
- Supports responsible water use in homes, clinics, and industry.



ENHANCE

Plastic Waste Reduction

- Replaces bottled-water use in residential and hydration markets.
- Each installed system can eliminate 1,000–1,500 plastic bottles per month for a family of four.
- Lower plastic disposal, fewer microplastics, cleaner water.



SUSTAIN

Lower Carbon Impact

- Eliminates emissions from bottled water manufacturing and transport.
- Reduces ~150–250 kg CO₂ per household per year.
- Long-life filters and recyclable components reduce long-term footprint.

CleanWater's technology inherently supports sustainability by delivering cleaner water with less waste, less plastic, and less energy use.



Compliant
NSF Standard 42
Class I Particulates
Cysts, Extraction



Compliant
NSF Standard 53
(PFOA/PFOS) less than 20 Parts Per
Trillion
(10PPT PFOA/10PPT PFOS) Chlorine
Reduction, Extractions



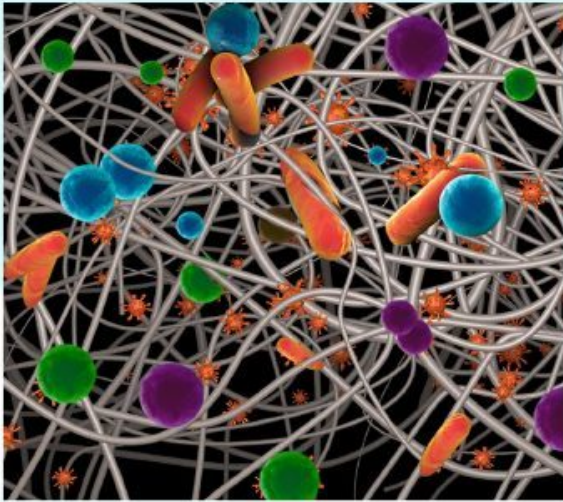
Compliant
NSF Standard 61
Extraction and Pressure



Compliant
NSF Standard 372
NSF Lead-Free

Step 1: Proprietary Nano-Based Filtration:

Breakthrough Technology



- Exceeds nanofiltration results at low pressure:
- 99.9999999% bacteria removal (>9 LRV*)
- 3rd party testing conducted at two different laboratories**
- 1.36 psi over 3-filter whole house system
- 99% reduction of heavy metals (includes 97.2% lead reduction)
- 95% reduction of PFAS (forever chemicals, PFOA/PFOS)
- No water loss (no back flushing or wastewater generated), unlike RO systems
- Does not need to be plumbed to septic or municipal wastewater outlet
- Extremely low pressure drop vs 30-40 psi drop with other whole house systems
- 10x dirt holding capacity than mechanical filters (spiral wound, polypropylene, etc.)
- Affordable, low maintenance, easy install, all parts included, no electrical or waste connections

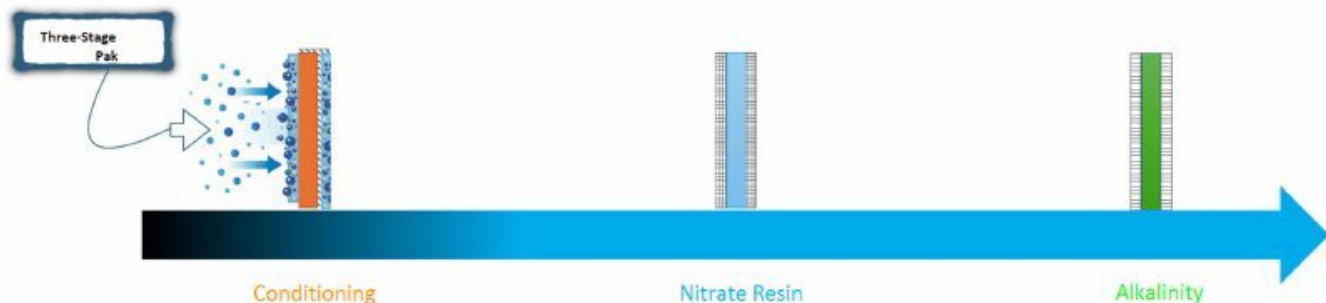
Proprietary filter requires less than 2 psi

Step 2:

Proprietary Nano-Based Filtration: Targeting unique pathogens/enabling slow release

Proprietary Modifications made to the filtration Enables Technology. This is only possible due to the high capacity and low pressure attributes of the nano plated substrate.

- Stage One - allows surface modification of each filter via mechanical filtration to be able to adsorb unique contaminants.
- Stage Two - allows unique resins/sorbents to be placed in the return core each filter. Also allows slow release of disinfectants, softening resins, pH adjustment resins, nutrients, etc.
- Stage Three - conditions and boosts the water's alkalinity



Proven by Data: Independent Testing and Early Pilot Results

Third-party testing and real-world trials confirm CleanWaterClean's superior purification and wellness performance.

Independent Lab Testing

- Verified 6 - 7 log microbial reduction (>99.9999 % elimination of bacteria and viruses).
- PFAS, PFOA, PFOS removal in compliance with NSF 53, 42, 61, 372 standards, third-party tested.
- Achieves zero wastewater output under continuous-flow conditions.
- Maintains constant line pressure during extended use.

CleanWaterCleanAir.com

Compliance	Straw	Squeeze Bottle	Under Sink	Whole House
NSF 42				
Class I Particulates	✓	✓	✓	✓
MicroPlastics	✓	✓	✓	✓
Cysts	✓	✓	✓	✓
Bacteria	✓	✓	✓	✓
Viruses	✓	✓	✓	✓
NSF 53	✓	✓	✓	✓
PFOA / PFAS / PFOS - Forever Chemicals	✓	✓	✓	✓
Lead	✓	✓	✓	✓
VOC's (Volatile Organic Compounds)	✓	✓	✓	✓
Asbestos	✓	✓	✓	✓
Microbial Cysts	✓	✓	✓	✓
Mercury	✓	✓	✓	✓
Radon	✓	✓	✓	✓
Inorganic chemicals	✓	✓	✓	✓
Arsenic	✓	✓	✓	✓
Cadmium	✓	✓	✓	✓
Chromium	✓	✓	✓	✓
Copper	✓	✓	✓	✓
Barium	✓	✓	✓	✓
Selenium	✓	✓	✓	✓
Disinfectants like...	✓	✓	✓	✓
Chloroform	✓	✓	✓	✓
Bromofrm	✓	✓	✓	✓
Bromodichloromethane	✓	✓	✓	✓
Dibromochloromethane	✓	✓	✓	✓
Herbicides / Pesticides	✓	✓	✓	✓
Industrial Solvents like...	✓	✓	✓	✓
Soil Fumigants	✓	✓	✓	✓
Plasticizers	✓	✓	✓	✓
NSF 61	✓	✓	✓	✓
Materials used to manufacture cause no toxicity.	✓	✓	✓	✓
Made in USA	✓	✓	✓	✓
NSF 372	✓	✓	✓	✓
Lead-Free	✓	✓	✓	✓

Zero-Waste Filtration: Environmental Innovation at Its Core

CleanWaterCleanAir reduces plastic waste and conserves water through responsible, high-efficiency design.

How Important is Plastic Waste Reduction: An example:

Annual amount of water bottles for a three family household

**Pallet
Of
Water**

**84 Cases
2,016 Bottles**



Estimated cost @ \$0.50/bottle
\$504/gallon

OR



Estimated cost @29.95/bottle
\$0.09/gallon

Sustainability

Each water bottle filter is viable for 500 gallons. That is equivalent to 2,000 water bottles. After consuming 500 gallons of water, another bottle is not required, only a replacement filter.

Bottled Water Quality:

- Usually devoid of minerals
- High in micro plastics
- Does not have to meet Safe Water Drinking Act standards as bottled water is classified under food regulations

Our Water Bottle Quality

- PFAS/PFOA/PFOS removed
- Chlorine removed
- Micro plastics removed
- Pesticides removed
- Pharmaceutical removed
- Lead removed
- Bacteria, virus, cysts and spores removed
- NSF certified

CleanWaterCleanAir's technology inherently supports sustainability by delivering cleaner water with less waste, less plastic, and less energy use.

For waste-water systems and reducing waste-water fines and fees.

Closing the Loop: Regenerative Water Treatment Opportunities

Regenerative Carbon Technology for Sustainable Wastewater Treatment

Our Closed-Loop Systems apply advanced, in-situ carbon regeneration processes to capture, restore, and reuse filtration media—delivering high-performance contaminant removal without the waste, chemicals, hauling costs or inefficiencies and liabilities of traditional systems.

KEY DIFFERENTIATORS

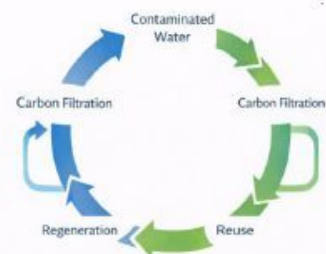
- Closed-Loop System – Minimizes or eliminates carbon disposal and transportation costs
- Reduced Operating Costs – Less media replacement and handling
- In-situ regeneration eliminates RCRA liability in hazardous waste hauling
- Lower Environmental Impact – No landfill waste, reduced chemical usage
- High Contaminant Removal – Effective on emerging contaminants (PFAS, pharmaceuticals, micro plastics)
- Scalable Design – Applicable across industrial, municipal, and commercial systems

MARKET CONTEXT

Industrial / Commercial Opportunity: \$20B+ global market 6–7% CAGR growth
Driven by:

- Sustainability mandates
- PFAS / emerging contaminant regulations
- Infrastructure modernization
- Water reuse initiatives

From Zero Waste to Wastewater Solutions—CleanWater delivers a complete, sustainable water life-cycle strategy.



HOW IT WORKS

Capture: High-surface-area carbon adsorbs contaminants including PFAS, VOCs, metals, and organics

Regenerate: Carbon is restored through proprietary regeneration process (thermal / oxidative / advanced oxidation)

Reuse: Media is returned to service—eliminating constant replacement and waste streams

Repeat: Continuous cycle reduces operating cost and environmental impact