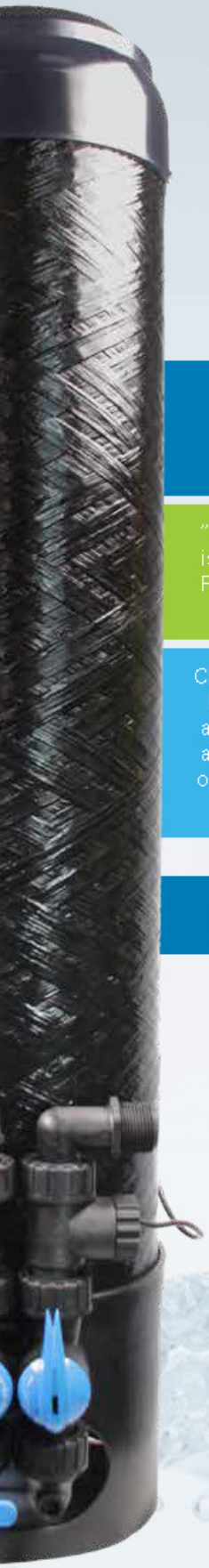
PIONEER™
Your customers' safety
is our number ONE priority
PIONEER is the First of its Kind
Whole-House
Lead, Cyst & PFOA/PFOS Removal System
POWERED BY
ENPRESS LLC
Where Innovation Flows™

LEAD IN WATER SYSTEMS



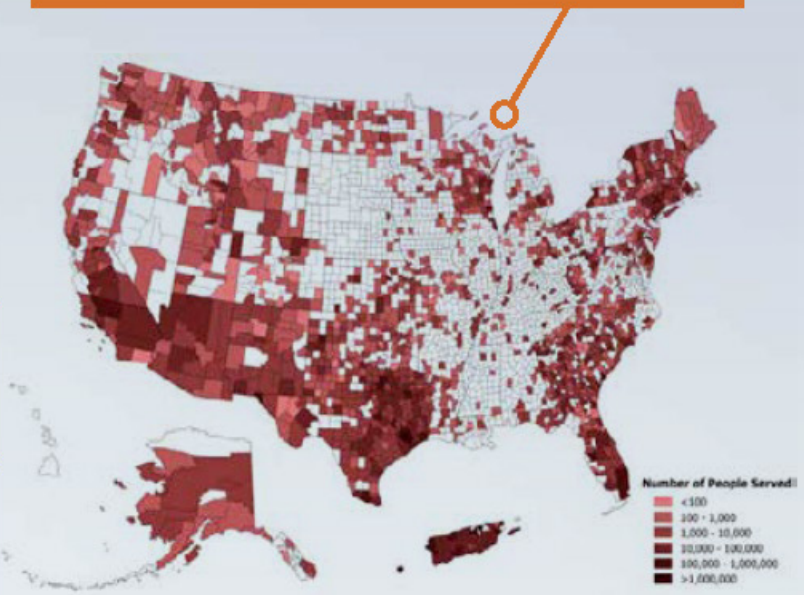
Eighteen million Americans live in communities where the water systems are in violation of the law. Moreover, the federal agency in charge of making sure those systems are safe not only knows the issues exist, but it's done very little to stop them, according to a new report and information provided to CNN by multiple sources and water experts.

The American Academy of Pediatrics states that there are no effective medical treatments for lead poisoning and that prevention of exposure is needed.

"The Drinking Water Action level for lead in water is set at 15 parts per billion (ppb), but in 1994 the FDA set the maximum amount of lead allowed in bottled water at 5 ppb."

Children with lead poisoning can have learning and behavior problems, hyper activity, slow growth, and hearing loss. Symptoms like tiredness, head and stomach aches, and low iron deficiencies are often mistaken for other illnesses. The only way to find lead poisoning is through a blood test.

MAP SHOWING LEAD IN COMMUNITY WATER SUPPLIES



SOURCE: https://www.cnn.com/2016/06/28/us/epa-lead-in-u-s-water-systems/index.html

According to the U.S. Council Of Environmental Quality, the risk of developing cancer is 93% higher in people who drink or are otherwise exposed to chlorinated water. Chlorine is a potential health hazard to both children and adults.

PIONEER SUCCESSFULLY REMOVES LEAD

Not only does **PIONEER** remove heavy metals such as lead, it also removes and/or reduces chlorine, chloramine and other harmful contaminants in your water, including >99.95% of Cysts.

Microbial Cysts like Giardia and Cryptosporidium can survive in cold water for several months, and can be resistant to disinfection, like chlorine, so they must be filtered out of the water supply.

Because Giardia can lead to dehydration from its symptoms include diarrhea, nausea, and stomach cramps, it has no long term effects.

Point-of-Use VERSUS Point-of-Entry
It's a no-brainer!

POU

- One filter capability per housing
- Short filter life
- Limited coverage in the home
- Typically for drinking water only
- Creates tremendous waste
- Lower flow rate (servicing one faucet)

POE (PIONEER)

- Whole house cartridge filter
- Long filter life for up to 100,000 Gallons or 1 year
- Removes Lead, >99.95% of Cyst, Chlorine, Chloramine, Taste, Odor
- Eliminates bottle water purchases
- Best whole house flow rate production
- Metered so homeowner knows when the filter needs to be changed, increasing safety

WHY **REMOVE LEAD**

The History of Lead Usage

Until it was banned in new home construction in 1986, more than 70% of cities in the US were using lead-based products for conveying water, because it was less expensive and more durable than iron. Lead pipe could be easily bent, allowing pipes to be shaped to conform to the contours of existing buildings or other structures.

How Lead Gets into Drinking Water

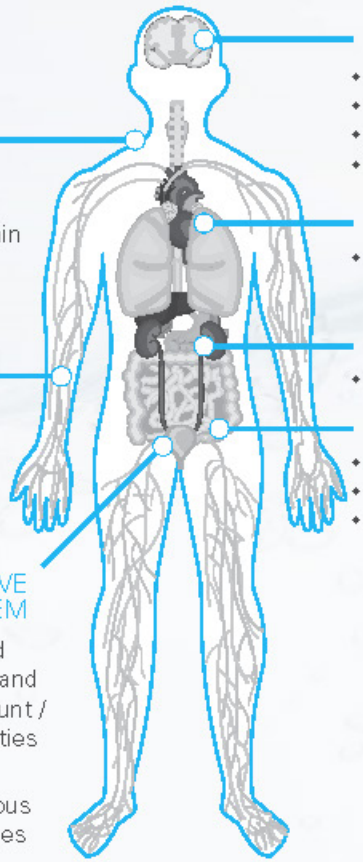
Lead can enter drinking water when service lines that contain lead corrode, especially where the water has high acidity or low mineral content that corrodes pipes and fixtures. This most often happens in the pipes that carry water from the water treatment plant to water mains under the street supplying homes. Lead release is heavily influenced by the chemistry of the water delivered by the water system and by physical disturbances such as road construction or water main replacements.

NUMBER OF CITIES USING LEAD UNTIL 1986

HEALTH EFFECTS OF LEAD

How Lead Affects Adults

Keep in mind that there is no safe level of lead for the human body and unlike other metals, it has no useful biological function. Even low concentrations of lead in water can cause a significant increase in blood lead levels and any damage is irreversible.



BRAIN
- Memory Loss
- Poor Concentration
- Headaches
- Depression

BODY
- Fatigue
- Joint Pain
- Muscle Pain

CARDIOVASCULAR
- High Blood Pressure

KIDNEYS
- Abnormal Function / Damage

NERVOUS SYSTEM
- Damage
- Numbness and Pain in Extremeties

DIGESTIVE SYSTEM
- Constipation
- Nausea
- Poor Appetite

REPRODUCTIVE SYSTEM

Decreased Sex Drive and Sperm Count / Abnormalities

Spontaneous Miscarriages

The Affects on Children

Lead is a potent neurotoxin which has significant effects on childhood health and development. According to the Centers for Disease Control and Prevention, lead exposure can affect nearly every system in a child's body, inhibiting the development of both physical and mental abilities.

The health effects information on this page is not intended to catalog all possible health effects for lead. Rather, it is intended to let you know about the most significant and probable health effects associated with lead in drinking water.

BRAIN
- Behavior Problems
- Lower IQ
- Hearing Loss
- Learning Disabilities

BODY
- Decreased bone and muscle growth

KIDNEYS
- Damage

NERVOUS SYSTEM
- Damage

BLOOD
- Anemia

HOW PIONEER REMOVES LEAD

FILTRATION EVERYWHERE TECHNOLOGY®

PI**ONE**ER provides the best filtration solution - starting at the source and giving peace-of-mind throughout the entire home.

OTHER HARMFUL ELEMENTS PIONEER REMOVES FROM YOUR WATER

PIONEER removes lead, which is a colorless, odorless & tasteless metal. In addition to lead, the patented PIONEER filtration system removes >99.95% of Giardia & Crypto, as well as Chlorine & Chloramine(*).

Giardia & Crypto – Waterborne parasite that causes diarrheal disease; very resistant to chlorine-based disinfectants, common in drinking and recreational waters.

Chlorine & Chloramine (*) – Water disinfectants added to municipal water, that have negative health effects and the most harmful exposure is through inhalation and skin adsorption of steam in a shower.

PIONEER™

PIONEER™ is specifically designed at a 0.5-micron nominal filtration level, to remove both particulate and soluble lead from your drinking water. Soluble lead is invisible, odorless, tasteless, and needs to be chemically removed from water. Particulate lead is like a tiny grain of sand that needs to be physically removed from water. The PIONEER™ POE filter is strategically designed to remove BOTH forms of lead contamination from the whole house in a single filter.

Soluble/Ionic lead: PIONEER™ binders are designed to chemically react with soluble lead to create an ionic bond, kinetically removing lead from the water. Ionic bonding is a chemical bond that involves the electrostatic attraction between oppositely charged ions, and is the primary interaction occurring in ionic compounds. Ionic bonds form when a nonmetal (binder/adsorbent) and a metal (lead) exchange electrons, as they do in PIONEER™.

Particulate lead: PIONEER™ filter is specifically engineered to physically remove and filter lead particles from water which is often found as a result of corroded lead pipes.

*The PIONEER™ POE filter has been tested for use at standard and peak flow rates for BOTH forms of lead. The Water Quality Platinum Seal and UPC shield demonstrate the certification by IAPMO R&T.

BUILT WITH HOMEOWNER EASE-OF-USE IN MIND

EASY TO UNDERSTAND LED REPLACEMENT NOTIFICATIONS

The Real-time Dynamic LED System monitors water and flow rate and provides a visual color-coded notification to the homeowner, letting them know when to replace their filter.

EASY FILTER REPLACEMENTS AND NO TOOLS REQUIRED

PIONEER uses state-of-the-art snap-ring technology to eliminate the need for cumbersome tools. Homeowners can easily replace the filter in their PIONEER system by followng a few simple steps.

PRESS THE RED PRESSURE RELIEF VALVE & PULL SNAP-RING

LIFT TOP CAP

*Meter preset at 100,000 gallons; see Installation Manual for resetting when the cartridge is replaced.
*Three AAA batteries not included, for battery back-up. Change annually with filter change-out.
*Refer to Installation Manual from proper installation and product service guidelines.

TESTING PIONEER

The the NSF/ANSI 53 Drinking Water Treatment Units - Health Effects standard, accredited by the American National Standards Institute (ANSI), is used to test and evaluate the effectiveness of water treatment equipment used in homes for the reduction of chemicals that may be present in drinking water, such as lead. The NSF/ANSI 53 standard contains four primary sections and is tested and certified by an accredited 3rd party certification body for Material Safety, Structural Integrity, Product Literature, and:

Section 1: Material Safety Testing, ensures that the water filter that has been designed to reduce lead from the drinking water will not add (leach) harmful contaminants to the water.

Section 2: Structural Integrity Testing, prevents water damage by ensuring that the filter is built to handle water pressure and water hammer typically found in homes. This test helps ensure products will not leak, break or crack during normal use.

Section 3: Evaluates the Performance of the filter to reduce water contaminants such as lead. The lead performance test created in the NSF/ANSI 53 standard is extremely rigorous. The US EPA's action level for lead in drinking water is 15 ppb. The influent lead level for NSF/ANSI 53 testing is 150 ppb or **10 times** the allowed level. NSF/ANSI 53 also requires testing at high and low pH levels to ensure the filter can remove lead in its ionic form and particulate form. For the duration of the testing the filter must reduce the influent lead concentration below 10 ppb, Enpress targeted levels below 5 ppb.

Section 4: Requires the manufacturer to include specific performance information in the product's Instruction Manual, data plate and a performance data sheet that lists the contaminants that have been tested.

This system has been tested according to NSF/ANSI 53 for reduction of lead and cyst. The concentration of lead in water entering the system (0.15mg/L +/- 10%) was reduced to a concentration less than or equal to permissible limit (0.010 mg/L) for water leaving the system, as specified in NSF/ANSI 53.

PIONEER™ SPECIFICATIONS

PIONEER NAME AND PART NUMBER	SIZE & MICRON RATING	RATED CAPACITY & FLOW RATE	PEAK FLOW & % REDUCTION OF LEAD & PFOA/PFOS	CHLORINE/CHLORAMINE TASTE AND ODOR REDUCTION CAPACITY (*)	PRESSURE DROP SPEC
PIONEER™ System CTA0840BBBKP5-04C00	8" x 40" 0.5	Lead Reduction and PFOA/PFOS 100,000 gallons @ 4.51 GPM (378,541 Liters @ 17.1 lpm) @99.62% lead reduction @97.9% PFOA/PFOS reduction	8 GPM (30.2lpm) @99.62% lead reduction @97.9% PFOA/PFOS reduction (*) >88,000 gallons at 8 GPM (333,116 Liters @30.2lpm)	>300,000 gallons @ 15 GPM (1,135,533 Liters @ 56.8 lpm) with greater than 90% reduction, estimated capacity using 2ppm of free chlorine. >150,000 gallons @ 8 GPM (567,812 Liters @30.3 lpm) with greater than 85% reduction, estmated using 3ppm of chloramine.	9 psid @4.51 GPM

REPLACEMENT CARTRIDGE FILTERS ARE LISTED AS PIONEER™ 0.5 Micron High Capacity Carbon Block // PART NUMBER: CT-05-CB-AMYCL

*Claims are not performance tested by IAPMO or NSF. Performance claims are based on independent laboratory and manufacturer's internal test data. Actual performance is dependent on influent water quality, flow rates, system design and application. Results may vary.

IMPORTANT

DO NOT USE extra lubricants, unapproved sealants and tools to tighten hand tightened only parts. Use of tools other than hand tighten only parts voids warranty. Testing was performed under standard laboratory conditions; actual performance may vary. Flush the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

PERFORMANCE

Performance claims are based on independent lab results and manufacturer's internal test data*. Actual performance is dependent on influent water quality, flow rates, system design and applications. Your results may vary. Performance claims are based on a complete system, including a filter, housing, and connection to a pressurized water source. This filter must be operated according to the system's specifications in order to deliver the claimed performance. It is essential to follow operational, maintenance, and filter replacement requirements, as directed for each application, for this filter and system to perform correctly. Read the Manufacturer's Performance Data Sheet accompanying the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

WARRANTY

LIMITED LIABILITY - ENPRESS LLC makes no warranties of any kind, expressed or implied, statutory or otherwise, and expressly disclaims all warranties of every kind, concerning the product, including, without limitation, warranties of merchantability and fitness for a particular purpose, except that this product should be capable of performing as described in this product's data sheet. ENPRESS LLC's obligation shall be limited solely to the refund of the purchase price or replacement of the product proven defective, in ENPRESS LLC's sole discretion. Determination of suitability of this product for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. Use of this product constitutes Buyer's acceptance of this Limited Liability.

If you have any questions regarding your water filter, contact your local dealer, OEM, or the manufacturer at the following:

MANUFACTURED BY

POWERED BY ENPRESS LLC *Where Innovation Flows™*

GNC Water Filtration Simplified™

For more information, visit enpress.com or onefiltration.com

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EPA Est. 092577-OH-001

This system has been tested for the reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 53 and P473. Minimum substance reductions are as follows:

SUBSTANCE	INFLUENT CHALLENGE CONCENTRATION (MG/L)	MAXIMUM PERMISSIBLE PRODUCT WATER CONCENTRATION (MG/L)	NSF/ANSI STANDARD
Lead	0.15 +/- 10%	0.01	53
Cyst	minimum 50,000/L	99.95%	53
PFOA/PFOS	1.5 +/- 10%	0.07	P473

Minimum Operating Temperature 34 F / 1 C
Maximum Operating Temperature: 120 F / 50 C
Minimum Operating Pressure: 20 psig / 1.38 bar
Maximum Operating Pressure: 125 psig / 8.6 bar
Electrical Requirements: Grounded & Unswitched 115 V outlet and 3-AAA Batteries
Filter Replacement Operating Instructions: New cartridges must be flushed for a minimum of 10 minutes prior to use. System and installation to comply with state and local laws and regulations.
Do not use with water that is microbiologically unsafe or unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.
Manufactured from NSF/ANSI standard 61 and California Prop 65 Compliant certified coconut shell carbon and raw materials.

CERTIFICATIONS

WATER QUALITY PLATINUM SEAL — IAPMO RESEARCH AND TESTING

This ENPRESS system is certified by IAPMO R&T against NSF/ANSI Standards 53 and P473 (also CSA B483.1) for the reduction of claims specified on the performance data sheet

NSF

This ENPRESS pressure vessel is tested and certified by NSF International against NSF/ANSI Standard 44 and 61 for materials and structural integrity requirements

COMPONENT

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