

# **GreenPro**<sup>™</sup> Water Systems

# Arsenic Solutions using **LayneR**

"Arsenic is one of the highest environmental cancer risks."

> - Arsenic Health Effects Program, University of California, Berkeley

#### **Arsenic**

The removal of arsenic from drinking water has become a hot topic across the country. This is due to the fact that arsenic has been shown to have health effects by the National Academy of Science and is present in over one million private wells. Arsenic raises the risk for many cancers, including bladder, lung and kidney.



A GreenPro Water System with LayneRT resin will reliably and efficiently reduce arsenic to safe consumption levels and comes with the service benefits that our GreenPro Water System program provides.

#### **Frequently Asked Questions**

#### Who makes GreenPro?

GreenPro is manufactured and supported by Layne Christensen Company, a U.S. company that is a world leader in water treatment tech-nologies. Layne has years of successful experience providing advanced and economical solutions for consumer, municipal and industrial users. When you see "Layne at the Core," you have arsenic removal technology at its best.

#### How do I know the system is working?

A sample kit is sent directly to your home at intervals based on your water chemistry. Using easy to follow instructions, you simply fill the sample bottle and return it using a pre-paid, pre-addressed return label. We continue to monitor performance by sending a sample kit to you as required by your water chemistry.

#### Who does the testing?

Using state-of-the-art technology, Layne chemists will analyze the sample to assure that your system is working at the optimum level.

#### LayneRT

LayneRT is the key component in the GreenPro POE system. LayneRT is proprietary, durable, arsenic-selective media, that has been developed as a significant improvement on the efficiency and longevity of adsorptive arsenic media. It is a reliable, high capacity technology that provides rapid adsorption kinetics without generating any fines and does not require backwashing.

### What happens when the first column needs to be changed?

Your treatment specialist will simply replace the column with a pre-loaded column - no mess, no worries. That column is then sent back to Layne for disposal. How well do you know your water?

Get to *know* it with GreenPro™ Water
Systems and LayneRT.

#### **Safe, Effective Arsenic Removal**

## The GreenPro Water System and LayneRT Advantages:

- Low cost, high quality resin that reduces arsenic to safe consumption levels
- · We manage system wastes for you
- No connection to sewer or septic required
- Continuous testing and monitoring of your water to ensure performance
- All system components and sorbents are NSF/ANSI 61 or 44 certified
- · Simple non-backwashing systems

Layne Water Treatment

Define Develop Deliver



#### **Our Systems**

We have systems for multiple flow rates and tank designs to meet any of your water treatment needs. Our water treatment specialists will work with you to find the system best fit for your water treatment needs.



	POE-09S	POE-09H	POE-10S	POE-10H	POE-12S			
Service Flow Rate	7.0 gpm	7.0 gpm	10 gpm	10 gpm	15 gpm			
Max Gallons Per Day	1,000	1,000	1,400	1,400	2,160			
Tank Size	9" x 48"	9" x 48"	10" x 54"	10" x 54"	12" x 52"			
Redundant (Lag) Tank	-	YES	-	YES	-			
Total Media Amount	.75 cuft	1.50 cuft	1.13 cuft	2.25 cuft	2.00 cuft			
Underbed	(not required)							
Inlet/Outlet	1" MPT	1" MPT	1" MPT	1" MPT	1" MPT			
System Rinse	(not required)							
Drain	3/4"	3/4"	3/4"	3/4"	3/4"			
Temperature Range	33°F-100°F							
Dimensions W x H	9" x 57"	24" x 57"	10" x 62"	26" x 62"	12" x 61"			
Shipping Weight	65 lbs	126 lbs	87 lbs	170 lbs	137 lbs			

	POE-12H	POE-14S	POE-14H	POE-24S	POE-24H		
Service Flow Rate	15 gpm	25 gpm	25 gpm	25 gpm	25 gpm		
Max Gallons Per Day	2,160	3,600	3,600	36,000	36,000		
Tank Size	12" x 52"	14" x 54"	14" x 54"	24" x 50"	24" x 50"		
Redundant (Lag) Tank	YES	-	YES	-	YES		
Total Media Amount	4.0 cuft	3.5 cuft	7.0 cuft	7.0 cuft	14.0 cuft		
Underbed	(not required)						
Inlet/Outlet	1" MPT	1.25" MPT	1.25" MPT	1.25" MPT	1.25" MPT		
System Rinse	Manual or Auto						
Drain	3/4"	3/4"	3/4"	3/4"	3/4"		
Temperature Range	(not required)						
Dimensions W x H	30" x 61"	14" x 62"	34" x 62"	24" x 59"	54" x 59"		
Shipping Weight	272 lbs	213 Lbs	423 lbs	446 lbs	886 lbs		

For higher flow rates, contact Layne

#### **Variables Affecting Arsenic Removal From Drinking Water**

Media used for arsenic removal is affected by a number of water parameters. Layne requires a full water analysis that must include arsenite, arsenate, pH, silica, phosphate, iron and manganese.

**Total Arsenic** – Total arsenic concentration above 0.30 mg/L will reduce media life.

**Arsenite As(III)** – The arsenic removal media removes both As(III) and As(V), but has approximately four times the capacity for As(V) over As(III). If arsenite is present it is recommended to oxidize the water ahead of the arsenic removal media.

**pH** – Adsorption media operate most effectively between 5.5 and 8.5. The media will reduce arsenic outside of this range but the capacity may be compromised. At elevated pH, silica becomes a more aggressive interfering species. Note: Do not use organic acids (such as citric or acetic) to adjust the pH ahead of the media.

**Silica** – Levels above 20 mg/L begin to interfere with media arsenic adsorption when combined with a pH above 7.5.

**Phosphate** – Levels above 0.15 mg/L will reduce media life for arsenic adsorption.

Iron & Manganese – Soluble iron and manganese may precipitate onto the media bed. If iron and manganese are above the secondary MCLs (0.30 mg/L and .050 mg/L respectively), it is recommended to filter them before the arsenic removal system.

**Hardness** – Does not affect the performance of the arsenic removal media.



#### **Dedication to Service**

Layne Christensen is committed to making water treatment as easy and as simple as possible. We monitor performance so you can always be confident that your system is working. All GreenPro Water Systems include waste disposal per EPA regulations..

