GLOSSARY OF TERMS

Acidic Water

Acidic water can cause corrosion and staining, most often a blue/green stain on fixtures, which comes from the copper pipes. If left untreated, leaks can occur and fixture finishes may deteriorate. pH is measured on a scale of 1 to 14 units, with 7.0 units being neutral, less than 7.0 units being acidic and any reading greater than 7.0 being alkaline. As pH decreases, the potential for corrosion worsens. A pH in the range of 6.5 to 8.5 is desirable.

Activated Carbon

Activated carbon is effective at reducing chlorine taste and odor, as well as other tastes and odors in household water. Of all known materials, carbon has the greatest ability to reduce contaminants in water through two distinct processes: adsorption and chemical reaction. Carbon effectively reduces harmful chemicals such as volatile organic compounds, including many pesticides and herbicides. By adding other ingredients to carbon, the media can be enhanced for specific performance, such as the reduction of lead and heavy metals.

Arsenic

Arsenic is a toxic, naturally occurring element found across the U.S. People using water containing arsenic are known to be at an increased risk of adverse health effects; it has been linked to cancer of the bladder, lungs, skin, kidney, nasal passages, liver, and prostate. Non-cancer effects can include thickening and discoloration of the skin, stomach pain, nausea, vomiting; diarrhea; numbness in hands and feet; partial paralysis; and blindness. Arsenic is odorless and tasteless, which means you need a water test to identify its presence. Arsenic is found across the United States with heavier concentrations in certain geographic areas like the Northeast and the upper Midwest. EPA has set the arsenic standard for drinking water at .010 parts per million (10 parts per billion) to protect consumers served by public water systems from the effects of long-term, chronic exposure to arsenic. Water systems had to comply with this standard by January 23, 2006, providing additional protection to an estimated 13 million Americans. (www.EPA.gov)

Chemicals and Bacteria

Well water quality can vary over time. Well water can be affected by animal waste, chemicals, pesticides, herbicides and insecticides that enter into ground water supplies from sources such as runoff from local farms, industries, landfills and from lawn treatment products. Chemicals and bacteria can cause a variety of health concerns that range from an upset stomach to more severe illnesses,

such as liver and kidney diseases, central nervous system problems and can increase the risk of cancer. (www.EPA.gov)

Chlorine

Chlorine is a sanitizing agent added to water supplies to insure safe drinking water. Chlorine affects the taste and odor of water, as well as food and beverages made with it. High levels can be drying to the skin and hair—including colored hair—and can fade laundry.

Cysts

Cysts are parasitic organisms that have a resistant protective shell in their dormant or larval stage. Cysts, including cryptosporidium parvum and giardia lamblia, are found in some municipal supplies and are resistant to chlorine. They enter lakes and rivers through sewage and animal waste. Cysts cause cryptosporidiosis, a mild gastrointestinal disease. However, the disease can be severe or fatal for people with severely weakened immune systems, such as infants and the elderly.

Dedicated Faucet

A separate faucet attached to a filtration or reverse osmosis system, providing only filtered water.

Formaldehyde

Formaldehyde is a volatile organic compound (VOC). Potential sources in the home include pressed wood products, such as particleboard or fiberboard; smoking; and glues and adhesives.

Full Flow

Point of use products called full flow filtration systems that connect directly to a kitchen or bathroom faucet (and do not require a separate faucet to be installed).

Hard Water

Hard water contains elevated levels of calcium and/or magnesium. According to the U.S. Geological Survey, over 70% of U.S. water supplies are designated as hard to very hard. Visible indication of hard water is the appearance of white spots on chrome faucets, shower doors and dishware. A less visible but more serious problem is build-up of lime and scale on plumbing fixtures and appliances that use water—especially water heaters. This build-up can result in damage to fixtures and appliances, shortening their useful life. Softeners use an ion

exchange process to remove the calcium and magnesium from the incoming water supply. (www.USGS.gov)

Hardness

Hardness refers to the quantity of dissolved calcium and magnesium in water. These minerals, which come primarily from limestone type rock formations, are found to some degree in almost all natural waters. When "hard" water is warmed, calcium and magnesium precipitate out of solution and form a hard, rock-like scale. This scale restricts flow and reduces heat transfer in water heaters and boilers. In addition, when calcium and magnesium combine with soap, they react to form a curd, which interferes with cleaning, dries out skin, and leaves deposits on plumbing and clothes. Reducing hardness in your water will help keep your hot water appliances running at high efficiency.

Heavy Metals

The heavy metals are toxic elemental metals, such as Lead, Cadmium, Mercury and Arsenic, which find their way into water supplies from natural and industrial sources, as well as home plumbing systems. These metals, especially Lead, can seriously affect the mental and neurological development of infants and children.

Manganese

Manganese is a metal similar to iron that causes brown/black stains. It can cause staining in concentrations as low as 0.05 parts per million (ppm).

Micron

One micron is one millionth of a meter or approximately 1/25,000 of an inch. For comparison, a human hair is 50-70 micron thick.

MTBE

Methyl tertiary butyl ether (MTBE) is a volatile chemical derived from natural gas that is added to gasoline throughout the U.S. to reduce carbon monoxide and ozone levels caused by automobile emissions. The chemical properties and widespread use of MTBE can result in contamination of drinking water sources. Most research on MTBE has focused on effects of inhaling the chemical. To date, independent expert review groups that have assessed MTBE inhalation health risks have not concluded the use of MTBE-oxygenated gasoline poses an imminent threat to public health. However, researchers have limited data about what the health effects may be if a person swallows (ingests) MTBE. The EPA’s Office of Water has concluded that available data are not adequate to estimate

potential health risks at low exposure levels in drinking water but that MTBE is a potential human carcinogen at high doses. (www.EPA.gov)

Particulate

Particulate is used to describe any number of small pieces of matter that remain individually dispersed in water and air. Examples include: sand, dirt, rust, dust, mold spores, etc.

pH

The pH Scale measures the relative acidity/alkalinity of a particular water sample. Water with a pH below 6.5 or above 8.5 is generally unacceptable for drinking water.

Plumbing System

Plumbing systems refer to the pipes, fixtures, and appliances in your home. In a larger view, this would extend to include the transportation piping and water treatment systems in your town.

Point of Entry

Point of Entry products are installed at the location where the cold water enters the home. These products process all of the home's water.

Point of Use

Point of Use products are installed at a particular household location, such as a kitchen sink. These products offer finer filtration for drinking and cooking water.

Reverse Osmosis

In the reverse osmosis process, raw water under pressure is forced through microscopic pores in the synthetic membrane, while larger dissolved solids (ions) and heavy molecular weight contaminants are continually flushed away as reject water. The filtered water is stored in a tank.

Scale

Scale is hard and rock-like and forms when "hard" water is warmed, causing calcium and magnesium to precipitate out of solution. Scale accelerates corrosion, restricts flow and reduces heat transfer in water heaters and boilers.

Sediment

Sediment is the small pieces of matter that remain individually dispersed in water. Examples include: sand, dirt, rust, mold spores, etc.

Soft Water

Soft water has been passed through a water softener or a reverse osmosis system, removing all or most of the magnesium and calcium removed. Opposite of hard water.

Soluble Metals

Soluble metals are metals from the earth's crust carried away by the acid content in rain water, subsequently ending up in water supplies. Excess metals, such as iron, create staining of plumbing fixtures and other areas where water comes in contact (i.e. toilets, tub/showers/dishwashers/washing machines, sidewalks, etc.)

SQC / Sanitary Quick Change

Sanitary Quick Change technology allows for easy filter changes. Just turn the filter a quarter turn to the right and the filter releases. Changes do not require any tools and leave no spills or mess.

Total Dissolved Solids

Total dissolved solids (TDS) is the sum of the mineral salts in water and, if too high, can result in objectionable taste (salty, bitter or metallic), cloudy ice, interference with the flavor of foods and beverages, and scale left behind in cookware. Generally, the lower the TDS, the more acceptable the drinking water.

Total Trihalomethanes (TTTM)

Total Trihalomethanes are a group of four chemicals that are formed along with other disinfection byproducts when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The trihalomethanes are chloroform, bromodichloromethane, dibromochloromethane, and bromoform. (epa.gov)

Turbidity

Turbidity is a measure of light diffraction in water. High turbidity shows the presence of high particulate or organic solids and can indicate the presence of cysts in surface water.

VOC

Volatile Organic Compounds (VOCs) are a group of over 40 chemical contaminants (including chemicals like benzene, toluene, and styrene) that have been found to have negative effects on human health. People can be exposed to VOCs through the air, in food, through skin contact, and in drinking water supplies. VOCs are contained in a wide variety of commercial, industrial and residential products including fuel oils, gasoline, solvents, cleaners and degreasers, paints, inks, dyes, refrigerants and pesticides.

Water Softening

Water softeners replace hardness ions (calcium and magnesium) in water that can cause scale build up on faucets/sinks and showers, with sodium or potassium ions