

## ANNUAL WELL CLEANING INSTRUCTIONS

**ITEMS NEEDED:** 1-4 Gallons of chlorine bleach (household bleach)  
5-6 Tablets of 1" solid swimming pool chlorine tablets (HTH - calcium hypochlorite)  
1-4 Five gallon pails  
"Iron Out" or similar product to clean your water softener  
You may want to set aside some water for personal use (toilets, washing, etc.)

### GET READY:

1.) **By-pass your water softener and other water treatment equipment.** At the same time, this is a good chance to clean your faucet screens and water softener system with "Iron Out" - or a like product. Item: Do not use "Iron Out" if you have a "zeolite" type softener.

### ADD CHLORINE (HOUSEHOLD BLEACH)

2.) Loosen the set screw on the well cap, and remove the well cap (you may have to tap it off with a hammer). **Add one to four gallons of household bleach to your well.** (Optional): Also add 5 - 6 tablets of 1" solid swimming pool chlorine (HTH). **Item:** Removing some well caps may require professional assistance. Use gloves to lift excess electrical wires out of well casing. (If wires are cracked or bared they should be taped or replaced.)

### MIX AND CIRCULATE

3.) **Run water into your well with a garden hose** - wide open, continue running for one-half hour. This will mix the chlorine and water in your well. At this point the water may appear off color, which is normal. As an option, periodically turn off the hose and pour a series of 5 gallon pails of water into the well to raise the head of the well and force chlorine into the aquifer.

4.) At each faucet (inside and out) remove the faucet screen and let the cold water run until you smell bleach, then turn off faucet and go to next faucet. Be careful not to get too much chlorine into your septic tank. Your family may flush the toilet (for personal needs) a couple of times if needed. More than that could kill needed bacteria in your septic tank.

### QUIET PERIOD

5.) Turn off all the water in your house (inside and out) and **let the entire system sit quietly for 6 to 12 hours.** Do not use any water if possible.

### PURGE THE WELL

6.) After six to twelve hours, get rid of the chlorine (bleach) **by running water from an outside faucet for 1 to 8 hours or until the water clears up and the smell of chlorine disappears.** Run the water onto your driveway, the ditch, or road. Take care not to run bleach into lakes, rivers, or streams. Bleach will kill fish and grass.

**(Notice: Do Not Drink Any Water Which Smells Or Tastes Of Chemicals!!)**

7.) Put your water softener back in service and manually regenerate. Soak and clean your faucet screens with vinegar before replacing.

### TEST YOUR WATER

8.) **Test or retest your water for bacteria.** A special lab sample bottle is required. Test within 1 week after cleaning and again in 2 weeks if water was found to be unsafe.

**AS A ROUTINE MAINTENANCE PRACTICE, CLEAN YOUR WELL AT LEAST ONCE A YEAR.  
IF YOU HAVE AN IRON OR SULFUR BACTERIA PROBLEM, CLEAN MORE OFTEN.**

## WATER QUALITY TERMS

### COLIFORM BACTERIA

Bacteriological safety of water supplies is based on analyses for coliform bacteria. These bacteria are present in large numbers in the soil and in the digestive tracts of humans and animals. They do not usually cause disease but their presence in water is an indication of contamination from surface water or septic waste. Any waste material contaminating your water is unnatural and suggests that pathogenic (disease causing) organisms may also be present. Such water is judged as **"UNSAFE"** for human consumption. Bacteriologically **"SAFE"** means there is an absence of coliform bacteria.

### NITRATES

10 mg/1 NO<sub>3</sub>-N (ten milligrams per liter (parts per million) nitrate and nitrate nitrogen) is the maximum standard for drinking water in this country. A nitrate level above 10 mg/1 in drinking water may cause serious health effects in infants and may indicate the presence of farm chemicals - even pesticides, in your water. A disease called methemoglobinemia (Blue Baby Syndrome) can be caused by nitrates in infants under 6 months of age. Nitrates in water are generally unnatural, but background levels of 1mg/1 or less are not unusual. Elevated levels should be monitored frequently.

### FLUORIDE

Fluoride as it occurs naturally in water supplies or in public drinking water, has been shown to be effective in reducing dental cavities. A level of 1.0mg/1 is desirable, but a level above 2.4 mg/L is likely to cause staining of teeth. Children regularly drinking water with close to or greater than 1 mg/1 of fluoride should not receive fluoride supplements, and the family dentist should be informed of the fluoride level in the water.

### ARSENIC

Arsenic is a toxic element and is widespread in the environment due to its natural occurrence and former extensive use in herbicides and pesticides. The most common, natural occurrence of arsenic is our diets; arsenic is found in many foods. Horizontal white lines on the toenails and fingernails indicate chronic arsenic poisoning. Other symptoms may include numbness and tingling in arms and legs, weight loss, nausea and diarrhea alternating with constipation and loss of hair. Arsenic poisoning can make people tired, lethargic and depressed without showing other long-term symptoms. Levels above 50 parts per billion in drinking water are considered harmful by the EPA and DNR.

### IRON AND/OR SULFUR BACTERIA

Because iron is one of the most abundant minerals in the earth's crust, it is very common in groundwater. Most are probably familiar with what happens when there is too much iron in water - a reddish-brown color, stained laundry, and poor tasting coffee. An equally common but less understood problem is infestation of water supplies with iron bacteria. These microorganisms combine mineral iron or manganese in the water with oxygen and use it to form rust-colored deposits. In the process, the bacteria produce a brown slime that builds up on well screens, pipes, and plumbing fixtures. A "rotten egg" smell is often caused by the presence of sulfur bacteria that produce hydrogen sulfide gas. Hydrogen sulfide gas is highly corrosive and can eat away plumbing connections and metal piping, including your well casing. Iron and sulfur bacteria are not harmful but can clog pipes and plumbing fixtures, produce odors, and provide a habitat for other bacteria to live including coliform bacteria.

**Please call our office if you have any questions.**