

# Say Goodbye To Sulfur

## Adding Hydrogen Peroxide To Wells Can Cure Water Woes

BY STEVEN MAXWELL

When Scott and Enid Runnalls decided to drill a deep well for water at their fifth generation farm on Barrie Island, in northern Ontario, the neighbors just shook their heads. Everybody knew there was nothing but sulfur water down there, and as I turned out, everybody was right. When we pumped the new well to see what it would produce, you could smell the rotten egg stench 100 yards away remembers Scott. But he's smiling as tells this story - smiling because he doesn't have sulfur water anymore.

The solution came from Bruce Wahl, a water treatment specialist in the Marntoulin-Barrie Island area. About a year ago he introduced the Runnalls' to the use of oxygen to eliminate sulfur water, and they've enjoyed odorless drinking water, showers and laundry since.

The system is simple. Small amounts of hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) are added to the water intake line in the basement by an electric injection pump just before the pressure tank. Hydrogen peroxide is just an ordinary water molecule with an additional oxygen atom temporarily tacked on. It's this extra oxygen atom that is the active ingredient in the system. Hydrogen peroxide is an inexpensive and convenient way to deliver it.

Whenever the water pump switches on, the hydrogen peroxide injector pump is energized too, adding H<sub>2</sub>O<sub>2</sub> to the incoming water stream from a plastic reservoir at a rate of about 30 parts per million. Once in contact with the water, the H<sub>2</sub>O<sub>2</sub> reacts with sulfur compounds changing them into a new form that can be filtered out. The Runnalls water softener does this job, but a whole-house carbon filter also works well

The H<sub>2</sub>O<sub>2</sub> injector system costs \$625 not installed. A replacement container of H<sub>2</sub>O<sub>2</sub>, that last for two to three years under normal household use, costs about \$280. You'll pay another \$1000 for a carbon filter, or \$1000 - \$2000 for a water softener if needed.

The only maintenance is to check your tap water with a strip of test paper occasionally, to make sure hydrogen peroxide is present in the right concentration. The injector pump is adjustable to deliver more or less H<sub>2</sub>O<sub>2</sub> as needed. If you've got a carbon filter in your system, check the water before it passes through, since the carbon will remove H<sub>2</sub>O<sub>2</sub> along with the transformed sulfur compounds and just about everything else.

Hydrogen peroxide does more than eliminate, sulfur water, too. It also kills bacteria, removes in any non-sulfur odor and changes dissolved iron into a form that's easy to filter out.

Large- hydrogen peroxide systems are also making their way onto the municipality scene. The largest public use of H<sub>2</sub>O<sub>2</sub> technology for odor control of sulfur-water began several

years ago in southern California. Various oxygen- based systems are also used in about 60 percent. of European municipal water supplies, where the drawbacks of chlorination have been a public health concern for some time. Scientific findings suggest that when chlorine reacts with organic materials in water (such as bacteria), it produces a family of chemical byproducts called trihalomethanes. Water drawn from surface sources like lakes and rivers is most likely to contain organic substances, but it can also be present in well water. In high enough concentrations trihalomethanes have been linked to health problems. Will hydrogen peroxide work for you? Almost certainly, but there are a few things you need to check first. One is the presence of dissolved iron in your water. If your water contains more than 0.1 parts per million of iron it can shorten the life span of a carbon filter. The solution is to install a sand filter before the carbon filter to trap the particles of iron oxidized by the H<sub>2</sub>O<sub>2</sub>.

The biggest challenge you'll face is finding a water treatment specialist to supply the equipment and hydrogen peroxide. Not everyone in the business offers H<sub>2</sub>O<sub>2</sub> systems explains Wahl. But, as its value becomes more widely recognized, the number of professionals offering this technology is growing.

In fact, some people believe that hydrogen peroxide offers health benefits when added to drinking water, especially as an infection fighter.

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