

## HOMEOWNER TIP

Tips to save water:

To conserve water, use low flow faucets and shower heads. Faucet flow should be less than 2.2 gallons per minute (gpm) in kitchens and 1.5 gpm in bathrooms. Shower heads should be 2.5 gpm or less.

Turn off the faucet while you are brushing your teeth.

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# WATER – PART 2 OF 2 PART SERIES – THE SECOND H IN H<sub>2</sub>O...

Water — it's as important to our survival as air. We assume there is an unlimited supply of quality water, or maybe we just never really think much about it; it's just there when we turn on the faucet.

But we can't take it for granted: the supply of quality water in our world is limited and we should take that seriously.

This is the second of a two-part series on water which looks at information resources, quality, quantity, how we use water, conservation and a few anecdotes. We hope you find it interesting. In this issue of *YOUR HOME*, we will examine:

- What quality we should expect
- How we can conserve

The information that follows is gathered from various established, credible sources including the following:

- American Ground Water Trust (AGWT) – [www.agwt.org](http://www.agwt.org)
- Environmental Protection Agency (EPA) – [www.epa.gov/ebtpages/water.html](http://www.epa.gov/ebtpages/water.html)
- American Water Works Association (AWWA) – [www.awwa.org](http://www.awwa.org)
- National Association of Home Builders (NAHB) – [www.nahb.org](http://www.nahb.org)
- U.S. Green Building Council (USGBC) – [www.usgbc.gov](http://www.usgbc.gov)

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## WHAT ABOUT QUALITY?

The Safe Drinking Water Act (SDWA) is a federal law first passed by the U.S. Congress in 1974 and last amended in 1996. SDWA applies to every public water system in the U.S.

The U.S. Environmental Protection Agency (EPA) administers standards for groundwater and drinking water. The SDWA establishes standards used by EPA. Standards have been developed for known contaminants such as arsenic, lead, copper, microbials and radon. For more information, visit [www.epa.gov/safewater/standards.html](http://www.epa.gov/safewater/standards.html).

The EPA estimates that approximately 20 percent of human exposure to lead is attributable to lead in drinking water.

On October 11, 2006, the EPA finalized the Ground Water Rule which targets utilities that provide water from underground sources, requiring greater vigilance for potential contamination by disease-causing microorganisms. More than 100 million Americans will benefit.

## WHAT SHOULD YOU TEST FOR?

When buying a new property or drilling a new well, the first test should include:

- ✓ Coli form bacteria
- ✓ Nitrate/nitrite
- ✓ pH (acidity)
- ✓ If pH is less than 7.0, test for lead.
- ✓ Chloride
- ✓ Iron
- ✓ Manganese
- ✓ Sulfate
- ✓ Hardness
- ✓ Alkalinity
- ✓ Total dissolved solids (TDS)


If your well is near an active or former gas station or underground fuel storage tank, also check for:

- ✓ Volatile organic compounds (VOCs), which would reveal evidence of hydrocarbon (oil, gas, etc.) contamination

If your well is in bedrock, also test for:

- ✓ Arsenic
- ✓ Radon
- ✓ Fluoride

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Following a satisfactory first test, you should test for Coli-form bacteria, nitrate and pH (acidity) on an annual basis.

Contaminating a groundwater source is easy to do. Lawn chemicals will do it. The use of chemicals for lawn fertilizer is coming under close scrutiny due to possible groundwater contamination risks. Small oil spills will also do it. And malfunctioning waste water systems will do it.

You can learn more about water testing standards and protocol at [www.epa.gov/ebtpages/water.html](http://www.epa.gov/ebtpages/water.html).

While water quality need not be a concern with most public water systems, it is worth noting that many public systems use groundwater as their source. The water comes from wells: The difference is that they are larger, deeper wells, managed as part of a controlled public utility. Public systems not served by wells are typically served by surface water from lakes. In this case, contamination must be monitored closely since open bodies of water are at higher risk than wells that access groundwater.

Public water supplies are chlorinated to control the growth of various organisms. Water from deep wells with short distribution systems (source to consumption) often does not require treatment. However, public concerns about water quality make treatment almost universal. There are those opposed to chlorination, however, citing studies that relate chlorine in water to higher cholesterol levels and a reduction in vitamin E (which helps prevent the formation of free radicals and, therefore, reduces the risk of cancer).

## HOW CAN I CONSERVE?

No matter where you get your water, the demand is actually growing faster than the population growth. Between 1950 and 2000, the population grew by 90 percent while the water usage grew by 127 percent. Basic economic laws of supply and demand mean less water will lead to higher prices. Many public water systems are being purchased by investment groups (both onshore and offshore), as they are recognized as good investments: good for the investor, but perhaps not so good for the consumer.

Conserving water is important. Some states in which grass must be irrigated to survive are issuing credits to give up grass and, thus, reduce water usage. Low water use fixtures are gaining ground in our new homes and renovations. Some are required by local regulation.

When you use water, think about it. Can you limit your use? Can you recycle?

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Green Building, a popular topic and the focus of many builders today, is based on guidelines from two primary sources: the National Association of Home Builders (NAHB) and the U.S. Green Building Council (USGBC). Both guidelines are currently voluntary but may become mandatory in the future, and they put high priority on water conservation to achieve any level of Green Building certification. For example, the NAHB guidelines have this to say about water conservation:

*Water usage has become a critical concern. Use recycled water for irrigation. Production of wastewater should be minimized. Consumption of potable water should be reduced. Low flow devices are already part of many codes. Re-use of wastewater and rainwater, filtering systems, and other approaches are all important.*

Most major plumbing manufacturers are rapidly expanding their product lines to include low water usage devices.

Listed below are a few things you can do to conserve water:

- Install low flow showerheads
- Take shorter showers
- Install low flow toilets; current models work much better than the earlier versions
- Install an on demand domestic water heater
- Keep your hot water heater close to its point of use
- Use low flow irrigation for vegetation, i.e., a drip system instead of sprinklers
- Separate and reuse gray water (sink, laundry waste water) where permitted by code
- Collect rainwater for non-consumption use where permitted by code
- Minimize discretionary use of water, e.g., car washing, irrigation

“Get used to living with less water” is a lead quote from The Kiplinger Letter, June 22, 2007. The article goes on to talk about mandatory limits on water usage now in place in some states, water recycling requirements and, in general, water conservation. The September 2007 issue of Popular Mechanics has an article about water conservation entitled, “Know your footprint – Water.” Conserving water is a reality; now.

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