



# Fact Sheet

Commonwealth of Pennsylvania • Department of Environmental Protection

## RADON IN WATER

The primary source of radon in homes is from the underlying soil and bedrock. However, an additional source could be the water supply, particularly if the house is served by a private well or a small community water system.

If your home or the home you are considering buying has been found to have radon in air concentrations of 4 picocuries per liter (pCi/L) or greater (EPA guideline), you may want to consider having the water tested if the house is served by an underground source, such as a private well or a community well. Many public water supplies use surface water which tends to have lower radon levels. If you are concerned about the public water supply, call your public water supplier. Testing for radon in water is not very expensive (\$40 - \$100) and is fairly easy to do.

Radon in water can be effectively reduced using one of two methods: aeration treatment or granular activated charcoal.

Aeration involves spraying the water or mixing it with air and then venting the radon. Granular activated charcoal systems filter the water through a charcoal bed. The radon attaches to the charcoal, and the water leaves the charcoal tank relatively free of radon. The charcoal may present disposal problems when the charcoal bed needs to be replaced.

In both of these treatment methods, it is important to treat the water where it enters the home. Trying to treat the water at the kitchen sink, for instance, would not be effective in reducing the amount of radon that enters the home. It is important to properly maintain home water treatment systems according to manufacturers' recommendations since failure to do so can lead to other water contamination problems. Aeration systems cost approximately \$2,000 - \$3,500. Charcoal systems cost approximately \$1,000 - \$1,500.

EPA has not yet set any guidelines for radon concentrations in water. EPA is now working to establish a radon guideline for water.

If you want to estimate how much of the radon in the air is caused by radon in the water, use the following rule of thumb. For every 10,000 pCi/L of radon in the water, 1 pCi/L would be emitted into the air. For example, if there is 40,000 pCi/L in the water, this will contribute about 4 pCi/L to the air.

For further information on radon in water, contact the state radon office (800-237-2366) or the EPA Drinking Water Hotline (800-426-4791). Information also can be found in the following EPA publications: *A Citizen's Guide to Radon*, 2nd Ed. (402-K92-001); and *Consumer's Guide to Radon Reduction* (402-K92-003).

This fact sheet and related environmental information are available electronically via Internet. For more information, visit us through the Pennsylvania homepage at [www.state.pa.us](http://www.state.pa.us) or visit DEP directly at [www.dep.state.pa.us](http://www.dep.state.pa.us) (choose Subjects/Radiation Protection/Radon).