

# Safe Well Water RI

Trusted, expert information

## Tip Sheet 18



*“Tip sheets helped us learn about our well water.”*

**Get Tip Sheets** at [www.rivelltesting.org](http://www.rivelltesting.org):

- 14 Tip Sheets about harmful substances
- 10 Tip Sheets about treatment choices
- 3 Tip Sheets about other topics of concern

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### Look for the NSF seal on water treatment devices.

NSF International is a non-profit group that sets performance standards for water treatment devices. Learn about NSF here: [www.nsf.org](http://www.nsf.org)

# Aeration Water Treatment Systems

## Test and talk before you treat!

**Use a State-certified testing lab.** Find a list of certified labs here: [www.health.ri.gov/find/labs/drinkingwater](http://www.health.ri.gov/find/labs/drinkingwater).

**Call and talk with a State water quality expert.** We can review your water test results with you and suggest ways to treat problems.

- » University of Rhode Island Water Quality Program: 401-874-5398
- » Rhode Island Department of Health: 401-222-6867

**If you decide to buy a treatment system,** work with a water treatment professional. They can help design a system to fit your needs. Before you buy a system, get at least 3 price quotes. Learn the questions to ask. See Tip Sheet 16.

**CAUTION:** Be aware that sometimes more than one system is needed to treat water. Consider whether using an alternative water supply such as putting in a new well, using public water if available, or using bottled water may be a better long-run solution.

## When would I need an aeration treatment system?

### Commonly used to remove:

- Dissolved gasses such as radon and carbon dioxide
- Some taste and odor problems such as methane and hydrogen sulfide
- VOCs (Volatile Organic Compounds) like MtBE (Methyl tertiary-Butyl Ether) and certain chemicals like dry cleaning fluid and other solvents

**Aeration can also remove** iron and manganese when an additional filter is used after the aeration system. See Tip Sheet 22.



## How aeration systems work

### These systems:

- **Are whole-house treatment.** Aeration is whole-house treatment, meaning that all the water used in the household will be treated.  
As you might guess from the name, this treatment depends on forcing large amounts of air into water. The forced air causes:
  - ▶ **Dissolved gases** or VOCs to release from the water.
  - ▶ **Dissolved forms of iron and manganese** to change into their solid form. This allows them to separate out from the water. Then another treatment step can trap the particles (Tip Sheet 22).
- **Require an air intake, a blower, and an air vent.**
  - ▶ **Air intake:** May be either outside or inside the home. Find a clean area, away from the vent (waste air discharge). Avoid areas that have moisture, mold, odors or airborne particles such as dust from a woodworking shop.
  - ▶ **Outside air intake:** Should be high enough to avoid pollution from cars or trucks, lawn equipment, boiler exhaust, and splash from roof runoff and garden hoses.
  - ▶ **Waste air:** Must be vented outside the home. The air is now moist and contains the gases released from the water. Vent should be above the eave of the roof.

## If I have an aeration treatment system, how do I maintain it?

All water treatment systems must be maintained according to the instructions that come with the unit.

- **Keep all paperwork and instructions** that come with the unit.
- **Keep records and receipts** of equipment maintenance and repairs.
- **Clean the tank once or twice a year.**

## Issues to think about before buying an aeration treatment system

- **Advantages:** No waste disposal needed. No need to renew or replace 'supplies' to maintain the system.
- **Need to vent waste air properly:** Vent should be above the eave of the roof.
- **Need to clean the tank:** Sulfur, iron sulfide, rust, and algae collect in the tank and should be 'flushed' once or twice each year.
- **Ask before buying a system:**
  - ▶ Any special installation requirements that may add to costs, such as changes to household plumbing?
  - ▶ How loud is the air blower? Sound proofing needed?
  - ▶ How much electricity does the air blower use? Is it energy efficient?
  - ▶ What maintenance is required?
  - ▶ Has the system been tested and certified by a third party?

## What else do I need to know about an aeration treatment system?

- Make sure it's installed and operated according to instructions.
- Make sure it works. After installing the system, have your water tested at a State-certified lab.