



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

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

## Microfiltration 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 a 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 a microfiltration system?

**Microfiltration:** ‘Micro’ means small. A microfiltration unit removes small particles and solids, including:

- ▶ Iron and manganese in their solid form (rust)
- ▶ Clay
- ▶ Silt and sand
- ▶ Some disease-causing germs, such as bacteria and viruses

**Pre-treatment:** Filters are often used to pre-treat water before the water passes through another treatment system. Pre-treatment with microfiltration allows the 2<sup>nd</sup> treatment to work or work better.

**Post-treatment:** In some cases, microfilters are used after other treatment, such as aeration. This is called post-treatment.

Microfilters are not intended for heavy loads of sand or solids. Heavy loads are better handled using a rapid sand filter, screen, sand separator, or other treatment.

## How microfiltration systems work

**Whole-house treatment:** Microfiltration is normally part of the household plumbing, so all water passes through the filter.

**Types of filters:** Different types of filters made of different materials remove different size particles. Filters are rated by the smallest particle they will remove, stated in microns. A micron is too small to see with the human eye. Removing bacteria and viruses requires a filter with a small micron rating. An example of a small micron rating looks like this: 0.00004.

Other substances may allow for slightly larger rating sizes. Larger rating size makes it easier to maintain the filter because it doesn’t clog as quickly.

## Issues to think about before buying a microfiltration treatment system

**These are usually low-cost, easy to maintain systems.** They ‘self monitor’—meaning that you will know when the filter is clogged and needs changing because water flow will decrease.

### Ask before buying a system:

- ▶ Type and size of filter needed to treat the substance of concern?
- ▶ Costs to install and maintain, including how often filters must be replaced and where they can be purchased?
- ▶ Any special requirements to install that may add to equipment cost, such as changes to household plumbing?

## If I have a microfiltration 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.
- **Change the filter** as needed.
- **Be prepared to remove the cartridge housing** (filter ‘sits’ in this) and clean and disinfect it.

## What else do I need to know about a microfiltration 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.