**Distillation**

**Water Treatment Systems**

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**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/privatewelltesting](http://www.health.ri.gov/find/labs/privatewelltesting).

**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
  Direct line to water expert: 401-874-5398
- Rhode Island Department of Health
  Ask for the Private Well Program: 401-222-5960

**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 a distillation treatment system?**

**Commonly used to remove:**

- Unwanted tastes and odor (including chlorine)
- Lead
- Certain man-made chemicals, including pesticides and paint thinners
How distillation systems work

**Distillation is a point-of-use treatment system,** meaning that it treats just water used for cooking and drinking. These units produce small amounts of treated water and are usually installed at only one (kitchen) faucet.

**Distilling is boiling** with a few extra steps:
- Heating the water and turning it to steam—which removes and leaves behind unwanted substances
- Cooling the steam back into pure water
- Storing the distilled water

**Systems treat different amounts of water.** A small unit might distill under one quart of water per hour while a larger cart unit might distill about 2 quarts of water per hour.

**Issues to think about before buying a distillation treatment system**

- **Possible flat taste of distilled water.** Since all minerals are removed, distilled water may taste ‘flat’.
- **Manual or automatic operation.** Some units include reset switches and timers that may help if demand for distilled water is high.
- **Questions to ask before buying a system:**
  - Does the storage tank hold enough treated water for daily use?
  - How often will the distiller need to be cleaned?
  - Will there be any special costs to install the system, such as changes to the household plumbing?

**If I have a distillation 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.

Over time, minerals will build up in the boiling chamber of a distillation unit and must be cleaned out. How often the chamber needs cleaning will depend on the amount of minerals in the water and how much water is distilled.

**What else do I need to know about a distillation 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.