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Rhode Island Home*A*Syst
University of Rhode Island
Cooperative Extension

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What is public drinking water?

Water companies supply drinking water to many homes, businesses and schools. This is public drinking water. People use public water for drinking, cooking and bathing, fire fighting and cleaning. An entire city, a school, a factory, an office building, a motel or a restaurant can use public drinking water.

Where does public drinking water come from?

The water you drink from a public water supply can be from **surface water** or **groundwater**.

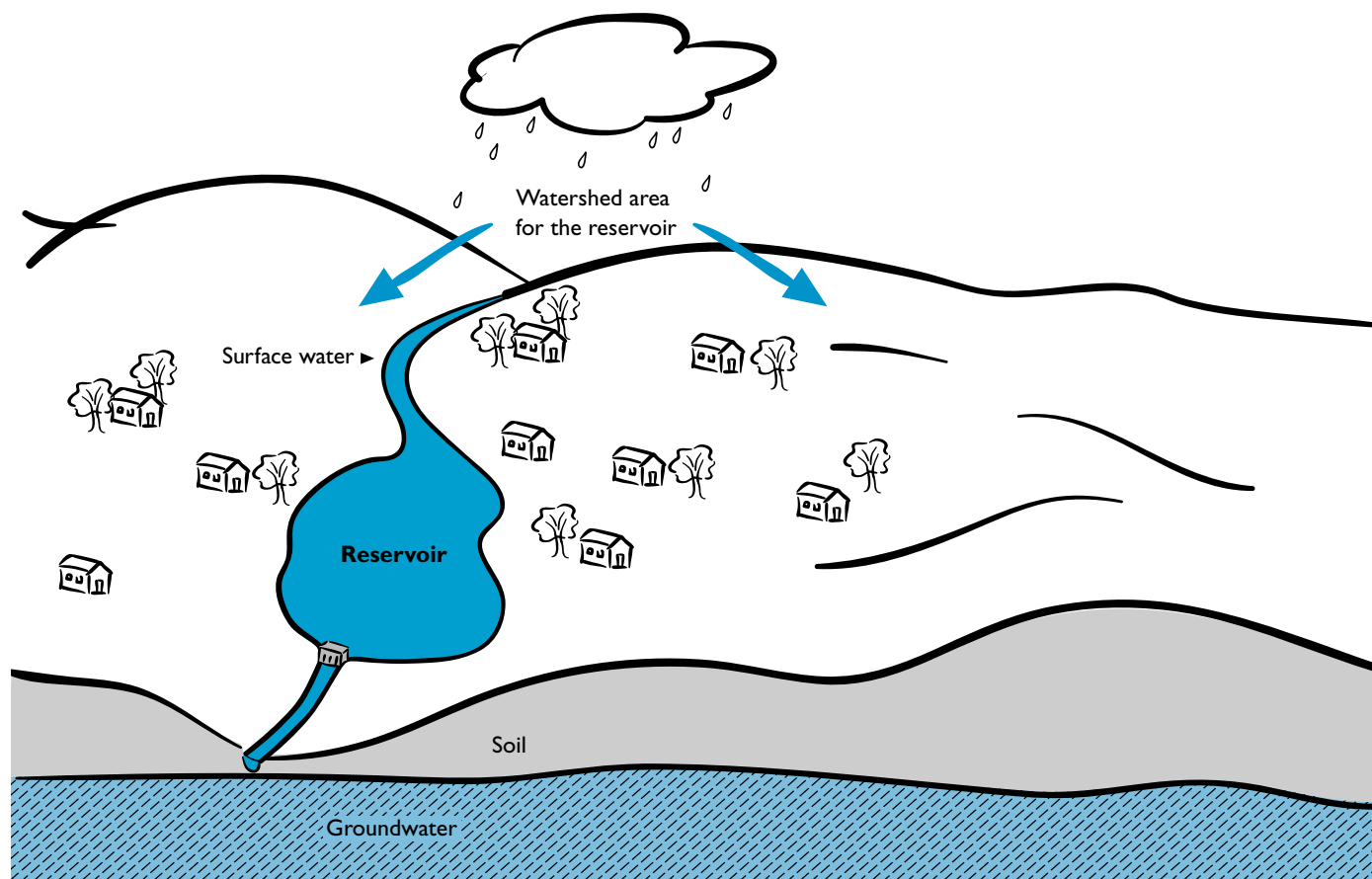
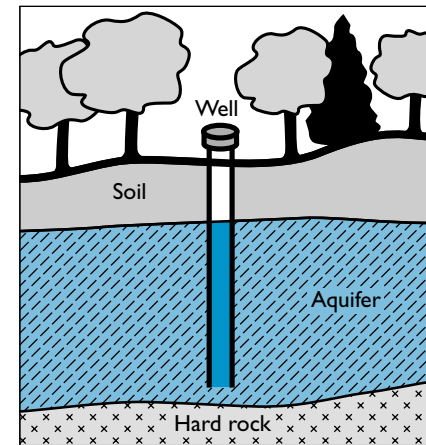
Surface water

Many water companies get drinking water from surface water. The drinking water is stored in a **reservoir**. A reservoir may be a lake, pond or dammed river. The land around the reservoir is called a **watershed**. Rain falls on the watershed and flows in rivers and streams to the reservoir.

Groundwater

Groundwater may be the source of your drinking water. Groundwater is water found underground in **aquifers**. The water company

drills a well into the ground to reach the water in the aquifer. Pumps and pipes pull the water out of the ground so you can drink it.



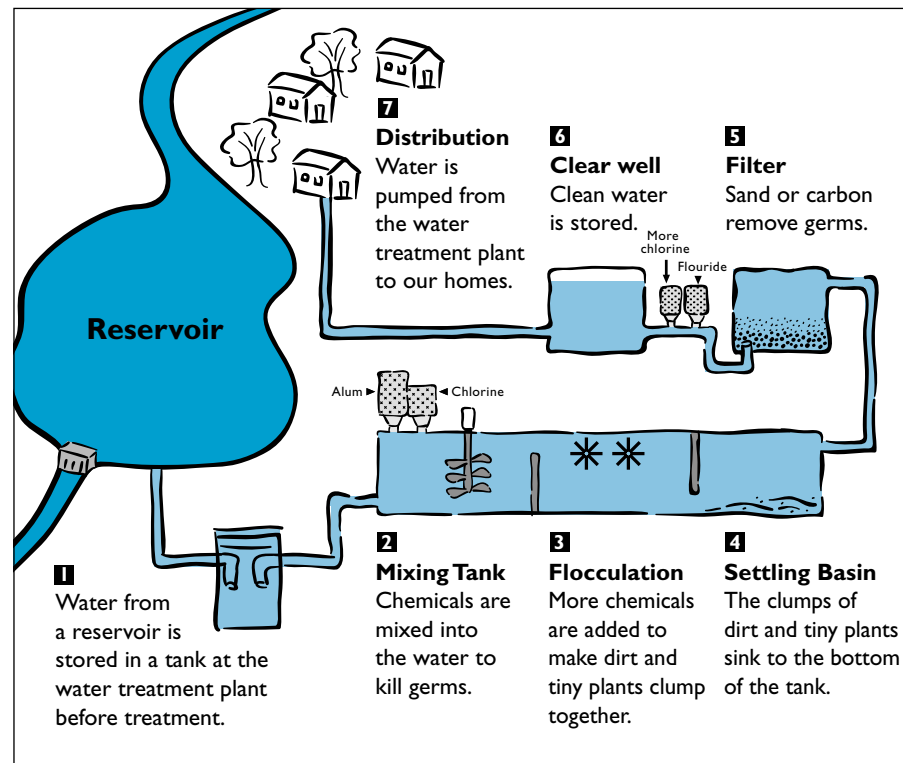
How is public water treated?

Water from a reservoir or well is treated to take pollution out. This makes it safe for you and your family to drink. The diagram on this page shows what happens to the water at a **water treatment plant** when it comes from a reservoir.

How does public water get to my home, school or work?

After the water is treated at the plant, pipes underground carry it to your home, work or school. The water company must keep the water clean and safe for drinking all the way to your neighborhood.

Diagram modified from EPA #810-B-92-016.



TAKE ACTION

Take a tour

Taking a tour of your water treatment plant is a great way to learn more about your drinking water. You may want to ask these questions on your tour:

- **Where does the water come from?** The water company can show you a map of the watershed or aquifers. They can point out the major reservoirs or wells that supply your water.
- **What kinds of pollution are in the watershed?** The water company will tell you where most of the pollution comes from, and what they are doing to protect your water.
- **How is the water treated?** You can walk through the treatment plant and see how the water is treated.
- **How does the water get to my home?** You will see the different kinds of pipes that carry water to your home.
- **What pollution has been found in our water this year?** You will learn if the water company found any pollution and what they did to remove it.
- **What can I do to keep the water clean?** The water company can tell you what you can do to help keep surface water and groundwater clean and safe to drink.

How do I know if my water is safe to drink?

A law called the **Safe Drinking Water Act** tells all public water companies to test the water. The United States Environmental Protection Agency (EPA), the State Health Department and your water company work together to test the water and to make sure it is safe to drink.

How does the test work?

Public water companies test the drinking water often. The water company takes water samples from the rivers and streams in the watershed, the reservoir or well, the water treatment plant, public buildings and people's homes. They bring the water to the laboratory and test it. They test the water for over 80 different chemicals. The water company must also find out how much of a chemical is in the water. They need to know if the amount of a chemical is above the **water quality standard**.

What is a water quality standard?

Water quality standards are limits on the amount of chemicals and germs allowed in the water. Some chemicals change the taste or color of your water but will not harm you. Other chemicals, and some germs, can make you sick. For these, the water is safe to drink if the amount of a chemical is **below** the water quality standard. If the amount of a chemical is **above** the water quality standard, the water may make you sick. How sick you become depends on how much of a chemical is in the water and what type of chemical it is. Some chemicals make you sick very fast, others take a long time to make you sick.

If a chemical in the drinking water is above the water quality

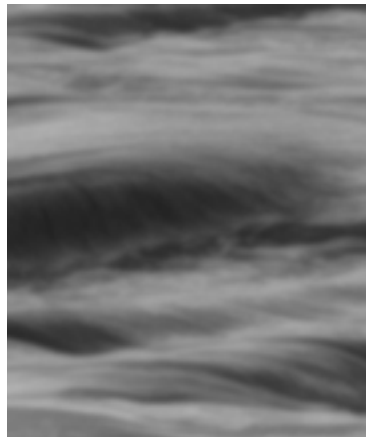
Understanding standards

The standard for lead is 15 **ppb** (parts per billion). If drinking water has 20 **ppb**, it is **above** the standard. The water company will take action.



standard, the water company will take action and do one or more of these things:

- Reduce the amount of chemicals in the drinking water.
- Tell the public about the problem.
- Tell the public if they need to boil their water or buy water in bottles.



TAKE ACTION

Ask for a water quality report

If you do not pay a water bill, you may not receive a water quality report in the mail. However, you can call your water company and ask to have one mailed to you. This is an example of what to say:

Water company: Hello, this is _____ (*your water company*). My name is _____ (*operator's name*). How can I help you?

You: My name is _____ (*your name*). I'm a resident of _____ (*your street*) in _____ (*your town*). I would like a copy of this year's water quality report.

Water company: Okay. I can send you a water quality report this afternoon. Can I have your mailing address?

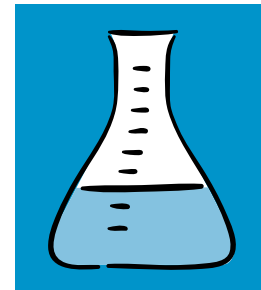
You: My name is _____ (*give your name again and spell it clearly*). My address is _____ (*give your mailing address*).

Water company: Thank you. You should receive the report in a day or two.

You: Thank you _____ (*operator's name*). Have a nice day.

Water quality reports

Water companies must give the state Department of Health the results of the water tests and let them know what types of chemicals they found. Water companies will send their customers a Water Quality Report with the test results for the year. The water company will mail the reports with the water bills. If you do not pay a water bill, you may not get a report in the mail. You can call your water company and ask them to send you a report.



Where does pollution come from?

Water is not pure. Think about any river or pond. There are many plants, fish, bugs, germs, minerals and chemicals in the water. These things in the water can cause pollution. Sometimes people cause pollution, too. What people do on the land can make the water polluted. What people do on the land near a reservoir or well can make the public drinking water polluted. Here are some examples:

- **Paving the land to make roads, driveways or parking lots.** Paved land collects oil and gas from cars. Rain washes the pollution off the pavement and into surface water that may be used for drinking water.
- **Storing chemicals in tanks buried under the ground.** Gas stations store gasoline in large tanks. Some people store home heating oil in buried tanks. These tanks can leak pollution into the drinking water under the ground.

- **Using poisons to kill weeds in gardens and lawns.** Some poison can spill onto the driveway or street. Rain will wash the poison into the storm drains that empty into surface water.
- **Using chemicals in our homes.** Oven cleaners, paints and strong detergents are all types of chemicals. If they are poured down the drain or spilled on the ground, they can end up in surface water or groundwater.

What can I do to keep reservoirs and groundwater clean?

There are many ways for you to help keep the water clean. Here's a list of things you can do at home:

- **If you use poisons to kill bugs or weeds,** do what the label says. Do not use too much and never dump poison on the street.
- **If there are bare spots on the lawn near your home,** cover them or plant grass on them to make sure the rain doesn't wash the soil away.
- **Do not store chemicals (bleach, paint, oven cleaner) outside.** Make sure that the bottles are closed tightly and have a label that tells what's inside.
- **If you spill poisons,** sweep up the spill with a broom and dust pan that is used only for this purpose. Reuse as directed on the label or throw the poison away at the EcoDepot in Providence (call 1-800-CleanRI for information).
- **Do not throw chemicals (weed-killers, rat poison, paint) in the garbage or down the drain.** Bring leftovers to the EcoDepot in Providence (call 1-800-CleanRI for information).
- **Clean up pet waste and throw it into the garbage.** Do not leave pet waste on the ground where rain can wash the germs into surface water.



How can I make my water safer to drink?

The water company is responsible for making sure that your water is safe to drink all the way to your neighborhood. However, metals can get into your drinking water from the pipes in your home. Homes built before 1978 may have pipes made with a metal called **lead**. Too much lead can be a problem for young children. Your water company or landlord can help you find out if the pipes are too old. You or your landlord may have to fix the pipes.

TAKE ACTION

Talk to your landlord

If you rent an apartment it is difficult to know the history of the building. Your landlord will be able to answer many of the questions that you have about your building. Here are some questions that you may want to ask your landlord:

- **When was this building built?** Many homes built before 1978 may have lead water pipes. Homes built before 1986 may have lead solder holding the pipes together.
- **Have the water pipes ever been replaced?**
- **Has the water ever been tested for lead?**

What can I do at home to make my water better?

There are many things that you can do to make your water better. Here are some simple things you can do at home.

Flush the pipes: When you wake up in the morning, or when you get home from work, let the water run for two or three minutes before you drink it or use it for cooking. When you do not use the water for awhile (when you are sleeping or at work) metals from the pipes can get into your drinking water. Drinking water with metals, like lead may not be safe.

Put water in the refrigerator:

Many people do not like the strong chlorine taste of their public drinking water. You can remove this taste by keeping a jar of water in the refrigerator, without a lid on it.

Buy a water filter: Water filters can take smells, tastes and other things out of your drinking water. They can make your water taste better. There are many different kinds of water filters. Some go under the sink, some go in the basement and some fit on your tap.

Each type of water filter fixes a specific water problem. For example, a **pitcher filter** (the kind that you pour water into and store in



Ask Yourself

Do I have lead or copper pipes in my home? Do I flush the pipes to make sure I don't drink the lead or copper? If you know that you have lead or copper pipes, you should let the water run for 2-3 minutes whenever you haven't used the sink for awhile. You should never use the hot water for cooking or drinking.

Do I boil my drinking water? If so, why do I boil my water? Water should only be boiled to kill germs. The water company will tell you if you need to boil your water before using it.

Do I have a water filter? If so, where is it? It is important to know where the filter is so that you can clean or change it.

When was the last time the filter was changed? When will I change the filter next? The filter instructions will tell you when to change the filter. If you do not know when the filter was changed last, replace it now. Read the directions to learn how to care for your new filter.

the refrigerator) may reduce lead, chlorine and bad smells. Make sure you know what is wrong with your water **before** you buy a water filter. You want to get the right water filter for the job.

Water filters need to be cleaned or changed. Germs can grow and live on the filter. If you do not clean the filter, the germs will get into your drinking water. The water might smell or taste bad or make you sick.

Boil your water if there are germs: Boiling water will kill germs in the water. Sometimes the water company will tell you to boil your water because of germs. You do not need to boil your drinking water if there are no germs to worry about.

Buy water in bottles: If you do not like the taste of your public drinking water, you may want to buy water in bottles from the grocery store. Water in bottles is not safer than public drinking water, but it might taste better. Always store the water in a cool, dry place away from chemicals and cleaners.

Buying water in bottles can cost a lot of money. If you are not happy with your public drinking water, you should contact your water company to let them know there is a problem with the water. They may be able to tell you how to make your water taste better without spending a lot of money.



Ask Yourself

What color is my water?

- **Cloudy** water can mean that air is getting into the pipes. Pour a glass of water and watch it. It should clear up in a few minutes.
- **Brown** water can be from the iron in the water pipes.

Does my water stain the sink, bathtub or laundry?

- **Blue or green** stains can be from a metal called copper. The water pipes in your house may have copper in them. Copper from the pipes can get into your water. Flushing your pipes will reduce the amount of copper.
- **Yellow, orange or reddish-brown** stains can be from iron in the water. Many pipes are made with iron. When the pipes wear down, the metal can get into the water. Iron is not a health problem.

How does my water taste?

- Public drinking water can taste like **chlorine**. Like most chemicals, chlorine is not harmful in small amounts. It helps keep people healthy because it kills germs. If your water tastes like chlorine, leave a jar of water in your refrigerator, without a lid, and the chlorine taste will go away.
- A **salty** taste can be from road salt used in winter getting into the water. This can be a health problem for people with high blood pressure or on low-sodium diets. You can consult with your doctor.

Does my water smell bad? What does it smell like?

- If the water smells **swampy** or **musty**, plants might be getting into the water supply.
- Your water may have a strong **chlorine** smell. Chlorine is added to the water at the treatment plant to kill germs.

If the water coming out of your sink is not clean, call your water company to find out why. Ask the water company to test your water or bring a water sample to a certified laboratory. Testing your water is the only way to know what is wrong with it.



TAKE ACTION

Write a letter

If you are worried about your drinking water, you should contact your water company and let them know. It is difficult for the water company to know how the water looks, smells or tastes at every home throughout your neighborhood. By writing a letter or making a phone call, you can get your questions answered and alert the water company to problems. Keep a copy of the letter for yourself so you can follow up.

This is a sample letter that you can use to write to officials at your public water company.



To _____ (*write name of water company*)
_____ (*include address*)

Date _____

Dear Sir or Madam:

I live on _____ (*write your street*) in _____
(*write your town*). I am writing to ask about the quality of
my drinking water. I have noticed that the _____
(*color, taste or odor*) of my water has changed. The water from
my tap _____ (*is brown, tastes like metal, smells like*
chemicals).

I would like someone to come to my home and collect a
water sample for testing as soon as possible. I would also
like to know what I could do to keep the water I am drinking
is as clean and safe as it can be.

Please call me at _____ (*write your phone number*) to
set up a time for the water sampling. Thank you for your time.

Sincerely,

_____ (*sign your name*)
_____ (*print your name*)
_____ (*write your address and your telephone number*)

◀ **1st paragraph:**
What is the problem?

◀ **2nd paragraph:**
What are you asking for?

◀ **3rd paragraph:**
How can someone get in
touch with you?

TAKE ACTION

Make a phone call

This is a sample script for calling your public water company if you want to have your water tested. It tells you what to say and what to expect the person you are calling to say.

Water company: Thank you for calling _____. (your water company). This is _____ (operator's name). How may I help you?

You: Hello. My name is _____ (your name). (Ask for the name of the person if they didn't tell you.)

I live on _____ (your street) in _____ (your town) and have noticed a change in my drinking water's _____ (color, taste, odor).

Water company: What seems to be the problem?

You: My water _____ (is brown, smells like chemicals, tastes like metal) and I would like to know if it is still safe to drink. Can someone come to my home and collect a sample?

Water company: Yes. We can send someone tomorrow at 1:00. We should have the results of the test by _____ (a few days from now). Please do not drink the water until then, O.K.? Can I have your name and address again?

You: (Give your name again and spell it out. Also give your address and telephone number). Can you tell me who will be coming to collect the sample?

Water company: Yes. _____ (name of sampler) will be coming to your home.

You: Thank you _____ (operator's name). Have a nice day.



◀ Say who you are.

◀ What is the problem?

◀ What are you asking for?

◀ Get the person's name
(write it down)

Turn to page 12 to find the names and phone numbers of agencies and people to call or write.

Who do I call or write?

Here are some important phone numbers and addresses that you can use to get more information about drinking water.

PUBLIC WATER COMPANIES

Information about public water sources, water quality, the treatment plant and distribution. Testing water at your home. Annual water quality reports. Tour scheduling.

Block Island Water Company

Town Hall, Box 220,
New Shoreham, RI 02807
TEL: (401) 466-3232

Bristol County Water Authority

PO Box 569, Bristol, RI 02809
TEL: (401) 245-5071

Town of Cumberland

76 Nate Whipple Highway,
Cumberland, RI 02864
TEL: (401) 728-2400

East Smithfield Water District

307 Waterman Avenue,
Smithfield, RI 02917
TEL: (401) 231-0510

Greenville Water District

PO Box 595, Greenville, RI 02828
TEL: (401) 231-1433

Jamestown Water Department

PO Box 377, Jamestown, RI 02835
TEL: (401) 423-7220

Kent County Water Authority

PO Box 192,
West Warwick, RI 02893
TEL: (401) 821-9300

Kingston Water District

PO Box 69, Kingston, RI 02881
TEL: (401) 783-5494

Lincoln Water Commission

PO Box 27, Lincoln, RI 02865
TEL: (401) 334-6735

Narragansett Water

Department

Town Hall, 25 Fifth Avenue,
Narragansett, RI 02882
TEL: (401) 789-1044

City of Newport

Halsey Street, Newport, RI 02840
TEL: (401) 847-0154

Town of North Kingstown

Town Hall, 80 Boston Neck Road,
North Kingstown, RI 02852
TEL: (401) 294-3331

Pawtucket Water Supply Board

85 Branch Street,
Pawtucket, RI 02860
TEL: (401) 729-5005
WEBSITE: www.pwsb.org

Portsmouth Fire and Water District

PO Box 99, Portsmouth, RI 02871
TEL: (401) 683-2090

Providence Water

552 Academy Avenue,
Providence, RI 02908
TEL: (401) 521-5070
WEBSITE: www.provwater.com

Richmond Water Supply Board

Town Hall, Wyoming, RI 02898
TEL: (401) 539-0150

Smithfield Water Supply Board

64 Farnum Pike, Esmond, RI 02917
TEL: (401) 233-1034

South Kingstown

180 High Street, PO Box 31,
Wakefield, RI 02880
See Kingston Water District

Tiverton Water Authority

1761 Main Road,
Tiverton, RI 02878
TEL: (401) 624-4486

United Water of Rhode Island

PO Box 429, Wakefield, RI 02880
TEL: (401) 789-0271

City of Warwick

City Hall, 935 Sandy Lane,
Warwick, RI 02886
TEL: (401) 738-2432

Westerly Water Department

68 White Rock Road,
Westerly, RI 02891
TEL: (401) 348-2563

Woonsocket Water Department

169 Main Street,
Woonsocket, RI 02895
TEL: (401) 767-2482

WATER IN BOTTLES

National Sanitation Foundation, International

PO Box 1468, Ann Arbor, MI 48106
TEL: (800) 673- 8010

WEBSITE: <http://www.nsf.org>

List of certified bottlers.

Information about pollution.

Information about laws that keep water safe to drink.

WATER FILTERS

Water Quality Association

PO Box 606, Lisle, IL 60532

WEBSITE: <http://www.wqa.org>

Information about the different types of water filters and how to choose the right one for your home.

URI Cooperative Extension Education Center Hotline

TEL: (800) 448-1011

Factsheets about drinking water testing and treatment.

DRINKING WATER & WATER QUALITY PROTECTION FACTS

University of Rhode Island Cooperative Extension

Home*A*Syst

TEL: (401) 874-5398

EMAIL: alyson@uri.edu

WEBSITE: www.edc.uri.edu/homeasyst

Factsheets and information about
preventing pollution at home.

Rhode Island Department of Health, Office of Drinking Water Quality

TEL: (401) 222-6867

Listing of state-certified laboratories.
Information about drinking water
and your health, bottled water and
safe drinking water laws. Answers to
questions about your family's health.

EPA's Safe Drinking Water Hotline

TEL: (800) 426-4791

Answers to questions about water
quality, testing and your health.

EPA's Office of Drinking Water

WEBSITE: <http://www.epa.gov/ogwdw>

Factsheets about drinking water
sources, regulations and protection.
Ideas for watershed and wellhead
protection projects.

DISPOSAL OF HOUSEHOLD HAZARDOUS WASTE

RI Department of Environmental Management, Strategic Planning & Policy Section

TEL: (401)942-1430 ext. 241

Information about EcoDepot in
Providence. How to throw away
your poison and chemical garbage.

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