

## Backflow Hazards

Great care has been taken to make sure the water delivered by the City of Santa Rosa is clean and healthful. The City is also



responsible for making sure the water remains clean until it reaches you in your home or business.

One step the City takes to ensure the quality of the water is to require backflow preventers to be installed by consumers who have potential hazards on their property which have a greater chance of polluting or contaminating our water in case of backflow.

Potential hazards include:

- Alternate water sources such as a well or creek
- Pumped sewer ejector
- Fire sprinklers
- Multiple water meters
- Boilers or other pressurized substances

The backflow prevention assembly is the key to preventing unwanted substances from entering our distribution system. In case of a drop in the City's water pressure, the backflow device will stop water from flowing in reverse and possibly contaminating the drinking water supply.

installation for conformance to city standards. Please see the companion brochure for information on a thermal expansion device which is required with a backflow installation. The backflow device will need to be tested and a completed test report will be required to certify the device is functioning. Backflow testing services vary but average \$50. Call several testers on our list to compare costs.



*Testing the device*

Backflow devices are complicated mechanical assemblies that are required to be tested annually for proper operation. These assemblies are out in the environment throughout the year in winter cold and summer heat. However, they are designed to give you many years of reliable service if properly maintained.



*Insulated bag for weather protection*

An insulated bag will protect the above ground device during freezing winter weather.



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## Backflow Device Installation



*The City of Santa Rosa Utilities Department inspects properties for compliance with backflow regulations. Some businesses and residents are required to install a backflow device.*

*If you need to install a device, you can either hire a plumbing professional or perform the work yourself.*

*A list of plumbers who are qualified to install and test backflow devices are on our website.*

*This guide will help those who choose to "do it yourself" plan and install the device according to Utilities Department requirements.*



Telephone: (707)543-3965  
[www.srcity.org/waterquality](http://www.srcity.org/waterquality)

## Getting Started:

Once you have decided to undertake installing the backflow prevention device yourself, prepare to follow these guidelines for an approved installation.

- 1) Follow the requirements listed in the letter from the City as to which backflow device you need to install. A thermal expansion device is required with the backflow installation. See our companion brochure for thermal expansion information
- 2) Obtain a City plumbing permit from the Community Development Department (Approximately \$60).
- 3) Purchase the proper backflow device and plumbing parts to complete the task.
- 4) Call for an inspection upon completion and arrange for the backflow test by a certified tester.

### Planning the Work:

Depending on the backflow you are required to install, the device can be installed above or below ground as shown in figure A & B to the right.

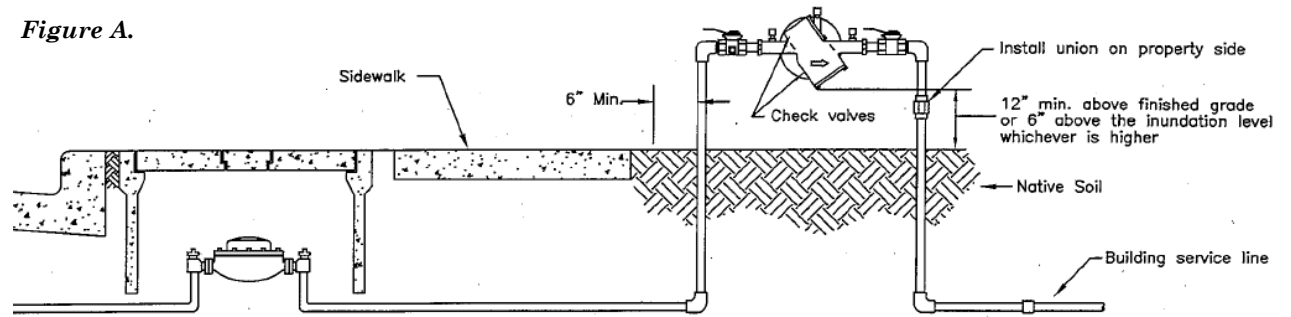
The work required is relatively simple plumbing and digging to locate the water line behind the water meter.

**You should call 811 to have other utilities located so you do not inadvertently dig into another utility, such as natural gas, electric, or telephone.**



**Know what's below.  
Call before you dig.**

Figure A.



### Doing the Work:

Dig down to the water line and locate the section you need to cut out (figures A and B). If the pipe is galvanized, copper, plastic or brass, you will need to cut out a section long enough to attach fittings as shown in figure A or B. The piping for the new section has to be threaded brass or type K rigid copper pipe. The copper pipe can either be "sweated" with solder or coupled with compression fittings. Remember that a thermal expansion device is required with a backflow installation.

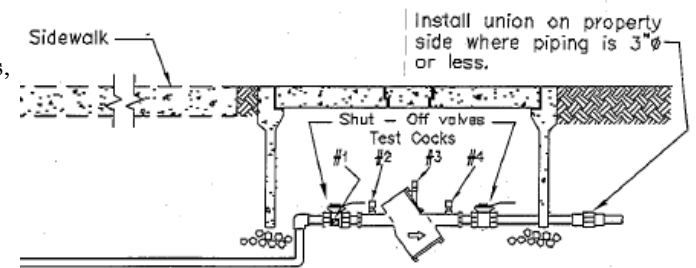
Efforts should be made to keep the piping as clean as possible so dirt or debris do not cause the backflow device to malfunction.



#### Parts to complete project

Assemble all the parts you will need to complete the project using figure A or B as a guide. A "union" is required on the property side of the backflow device to facilitate installation or replacement. Loosely connect the device and fittings to "dry fit" the assembly to the water piping. Once you are satisfied the

Figure B. Below ground backflow requires a pit box and lid.



device will fit together, begin connecting all the parts by threading them or soldering them together. Make sure that the arrow on the backflow device is pointing the direction you want the water to flow. Use the union for the final connection.



#### Completed assembly

Check for water leaks at your fittings and make adjustments if needed. Then contact the City for an inspection.

The water quality personnel will inspect the