

HOW MUCH WATER DO I USE?

In general, per capita water use ranges from 40 to 80 gallons per day (gpd) in the eastern United States.

TYPE OF USE	USAGE PER PERSON
Shower or tub	15 - 25
Sink	3 - 5
Toilet	5 - 15
Washing clothes	10 - 20
Washing dishes	5 - 10
Cooking	1 - 2
Miscellaneous	1 - 3
40 - 80 GPD	



Little leaks add up in a hurry. A faucet drip or invisible toilet leak that totals only two tablespoons a minute comes to 15 gallons a day. That's 105 gallons a week and 5,460 wasted gallons of water a year.

WATER CONSERVATION TIPS

- ◆ Install rain sensors on sprinkler systems
- ◆ Water lawns in early morning
- ◆ Don't run the hose while washing the car
- ◆ Check for toilet leaks (free test kits available)
- ◆ Utilize low-flow showerheads and fixtures
- ◆ Turn water off while brushing teeth
- ◆ Run dishwashers and washing machines with full loads only

Try the concept of Xeriscape™ (pronounced Zer-i-scape), which means "landscaping for water conservation." The idea is to use plants that require less water. You also can decorate creatively with interesting objects that need no water at all, such as rocks, bricks, benches, gravel and deck areas.

FREE INDOOR & OUTDOOR CONSERVATION KITS ARE AVAILABLE AT OUR OFFICE

CRUSH IT - DON'T FLUSH IT

Medications that are flushed down the toilet can and do find their way into our aquifer every day.

Here are four safe steps toward proper disposal:

- 1- Pour medication into sealable bag. If medication is a solid, crush it or add water to dissolve it.
- 2- Add cat litter, sawdust or coffee grounds to the plastic bag.
- 3- Seal the plastic bag and put it in the trash.
- 4- Remove and destroy all identifying personal information from all medication containers before recycling them or throwing them in the trash.

Source Water Assessment and Protection (SWAP)

What is a SWAP?

The Source Water Assessment Protection (SWAP) program assesses the susceptibility of public water supplies to potential contamination by microbiological pathogens and chemicals.

What Is My System's Ranking?

A susceptibility ranking of high, was assigned to this system using the information collected during the assessment by the DEP. A source's susceptibility to contamination does not imply poor water quality. Actual water quality is best reflected by the results of regular water tests. To learn more about your water quality, refer to this report.

Where Can I See The SWAP Report?

The complete SWAP report is available at the Water Department Office and Board of Health. For more information, call Superintendent Chris Wiseman at 508-428-2687.

Residents Can Help Protect Sources By:

- practicing good septic system maintenance
- taking hazardous household chemicals to hazardous materials collection days at the Barnstable Transfer Station (call for dates)
- limiting pesticide and fertilizer use, etc

CROSS CONNECTION

Cross connection is the interconnection of a potable (drinkable) water line with non-potable piece of equipment or piping. Examples of non-potable equipment may include fire protections systems, lawn irrigation systems, air conditioning or cooling systems as well as high pressure boilers.

Through the implementation of our cross connection program, commercial businesses have been surveyed and proper backflow devices have been installed. These devices are tested as regulated.

Check valves have been installed as part of meter installations in residential homes since the late 70's. The department highly recommends using a licensed plumber, as they are knowledgeable with check valve operation.

MEETING SCHEDULE

The Board of Water Commissioners meets on the third Thursday of each month at 5:00 P.M. at the Water Department office. Meetings are subject to change and are posted at the Post Office, Town Hall, Fire Station, District website and our office.

BOARD OF WATER COMMISSIONERS

Frederick Kiely, Chairman
Theodore Barnicle
George Calise

COTUIT WATER DEPARTMENT

2011 WATER QUALITY REPORT



Flushing on Santuit Road May 2011

P.O. Box 451 • 4300 Falmouth Road

Cotuit, MA

508-428-2687 • Fax: 508-428-7517

www.cotuitfiredistrict.org

SUPERINTENDENT
Chris Wiseman

Public Water
Supplier ID # 4020003



WHERE DOES COTUIT'S WATER COME FROM?

The Cotuit Water Department draws water from five groundwater wells located on 244 acres of District-owned land. Three stations are on Sampsons Mill Road, one is on Main Street and one is on Rte. 28.

2011 COTUIT WATER FACTS

Population Supplied: Winter: 3,505
Summer: 5,514

Accounts: 2212
Total Pumpage: 185,307,000 Gallons
Largest Day: 07/04/11 1,452,000 Gallons
Interconnections: 4
3 with C-O-MM Water; 1 with Mashpee Water
Miles of water mains: 52
Storage Tanks: 3 (900,000 gallon total capacity)
No. of Hydrants: 432

The pH of water on Cape Cod is acidic and ranges from 4.7 to 6.5 (pH is the measure of acidity or alkalinity of a liquid). On the pH scale, the number 7 is neutral, less than 7 is acidic and more than 7 is alkaline. Due to the lower pH in our water, we add a harmless substance (hydrated lime) to the water to reduce corrosion in the distribution system and in your home.

SYSTEM MAINTENANCE AND IMPROVEMENTS

- ★ The annual leak detection program was completed.
- ★ The well at Station 2 was cleaned and re-developed.
- ★ 1540 ft. of 8" water main and 3 hydrants were installed in Cotuit Meadows subdivision.
- ★ Approximately 300 meters were replaced.
- ★ An energy-efficient motor was installed at Station 4.
- ★ Three hydrants were replaced on Putnam Avenue.
- ★ The lime slurry delivery/service truck was replaced.
- ★ All three water storage tanks were inspected.



FLUSHING PROGRAM

The water mains are flushed every Spring as part of a preventive maintenance program to ensure that the water quality is not being compromised. Flushing notices are published in the Cape Cod Times and Barnstable Patriot and posted on the District website at the end of March. Daily flushing locations are also posted on the District website in April and May.

In 2011, over 500 water quality tests were conducted for drinking water compounds. These tests confirmed that your drinking water far exceeded all Federal and State regulations and that your water is safe to drink.

2011 Water Quality Information Table

Regulated	MCL	MCLG	Highest Level Detected	Range of Detection	Violation	Possible Source of Contamination
Nitrate (ppm)	10	10	1.8	1.0 - 1.8	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Gross Alpha activity (pCi/L) (data from 2003)	15	0	.9 (+/- 1.1)	0 - .9	NO	Erosion of natural deposits
Radium 228 (pCi/L) (data from 2003)	5	0	.9 (+/- 0.8)	0 - .9	NO	Erosion of natural deposits
Barium (ppm)	2	2	.059	.020 - .059	NO	Erosion of natural deposits
Unregulated	ORSG	SMCL	Average	Range of Detection		
Sulfate (ppm)	-	250	7	6.7 - 8.2	NO	Naturally occurring
Sodium (ppm)	20	-	16	13 - 22	NO	Naturally occurring salt deposits; storm water runoff
Chloroform (ppb)	60	-	1	0 - 1.7	NO	Naturally occurring
MTBE (ppb)	70	20-40	.6	0 - .9	NO	Leaking underground storage tanks
Lead & Copper	Action Level (AL)	MCLG	90th Percentile	Sample sites above the AL		
Lead (ppb) (data from 2010)	15	15	0	0 out of 20	NO	Corrosion of household plumbing
Copper (ppm) (data from 2010)	1.3	1.3	.12	0 out of 20	NO	Corrosion of household plumbing
Microbiological Contaminants	MCL	Highest # of positive Samples				
Total Coliform	>5% of samples	5			YES	Naturally present in environment

In November, three (3) routine samples and two (2) repeat samples showed the presence of total coliform. Flushing in the affected area resolved the problem. In December, one (1) routine sample and three (3) repeat samples showed the presence of total coliform. Due to the reoccurring problem, the Department chose to introduce chlorine into the system for at least 30 days. The likely source was the unseasonably warm winter weather.

Terms & Abbreviations

ppm - Parts per million - or milligrams per liter (mg/l)

ppb - Parts per billion - or micrograms per liter (ug/l)

AL - Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. MCL's are set at very stringent levels.

MCLG - Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Unregulated Contaminants - Unregulated contaminants are substances without MCLs for which EPA requires monitoring. For some of these substances, the Massachusetts Office of Research and Standards (ORS) has developed state guidelines or secondary MCLs.

(ORSG) Massachusetts Office of Research and Standard Guidelines - This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure, with a margin of safety. If exceeded it serves as an indicator of the potential need for further action.

SMCL - Secondary maximum contaminant level. These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

pCi/L - Picocuries per liter - Measure of radioactivity of water.

90th percentile - out of every 10 homes tested, 9 were at or below this level.

Methyl Tertiary Butyl Ether (MTBE) - has been used since the 1980's as an additive for unleaded gasoline to achieve more efficient burning. The state guideline is 70 ppb. At the present time, testing is done on a monthly basis.

Chloroform - is a trihalomethane (THM). The maximum THM level allowed in drinking water is 100 ppb. Levels of chloroform below 60 ppb are generally considered not to be a health risk. Testing is done annually.

Sodium - sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the sodium levels in drinking water where exposures are being carefully controlled.

Lead in Drinking Water

"If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Cotuit Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>."

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from stormwater runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, or septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the DEP & EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) and the Mass Dept. of Health regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. More information can be obtained by calling the EPA's Safe Drinking Water Hotline 1-800-426-4791

SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be at particular risk from infections. These people should seek advice from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.