

## Commonly asked questions

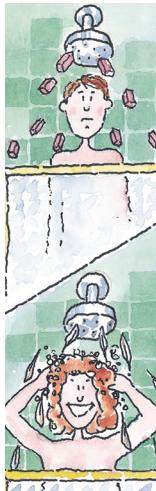
### Is Greenfield's water hard?

No! There is a common misconception that all New England water is hard. This is not true. Greenfield's water is categorized "soft" meaning that it contains less than 75 ppm (less than 4 grains) of hardness.



### Is Greenfield's water fluoridated?

No! Greenfield's drinking water is not, nor ever has been fluoridated. Parents should discuss their children's fluoride needs with their dentist and pediatrician.



### Should I use hot water to make baby formula?

No. Hot water may contain impurities such as rust, copper and lead that come from the hot water heater and plumbing in your house. These impurities can generally dissolve into hot water faster than into cold water.

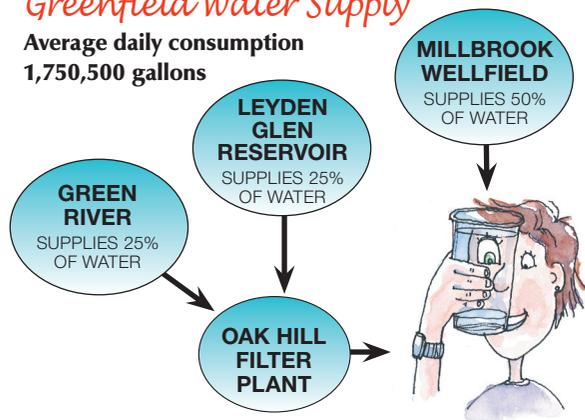
### Why do you add chlorine to our water?

**I hate the taste!** Disinfection of surface water supplies such as the Green River and Leyden Glen Reservoir is mandated by federal law and for very good reason. Undeveloped areas of the world that do not provide chlorination of public water supplies are still plagued with cholera, dysentery, typhoid and other water-borne diseases. Chlorine is the most effective and economical means to achieve disinfection. We do recognize that some of our customers find the taste and odor of chlorine unpleasant. An easy way to remove chlorine from the water is to draw a pitcher (preferably glass) of water and place it, uncovered, in the refrigerator for a few hours. The chlorine will dissipate, thus improving the taste.



## Greenfield Water Supply

Average daily consumption  
1,750,500 gallons



### GREEN RIVER WATER SUPPLY DAM REPAIRED

On August 28, 2011 high flows caused by Tropical Storm Irene overtopped the Green River dam, resulting in the failure of the core wall and the loss of the transmission line that delivers water from behind the dam to the Green River Pump Station. The Green River annually supplies 25% of the town's water and is typically used from May - Nov. The town has three sources of drinking water, two of which were not impacted by Irene, so the town's ability to supply high quality water during and after Irene was never compromised. The water line was reestablished in October 2011 and the permanent repair to the dam was completed in the spring of 2012 at a cost of \$1,760,075 of which 75% is eligible for reimbursement by FEMA. This photo, taken from the east side of the river, is of the repaired dam. The work included placement of articulating concrete mats on both the upstream and downstream side of the core wall so that if the wall were to be overtopped again, it will be able to withstand the event.

The design for the repair of the covered bridge is complete and being reviewed by Mass DOT. Reconstruction is scheduled to take place in the summer of 2013. The bridge was swept off one of its abutments and sustained structural damage as well during the flood.

# WATER QUALITY REPORT 2012

GREENFIELD, MASSACHUSETTS  
MAYOR WILLIAM MARTIN



Green River dam breached by Tropical Storm Irene on August 28, 2011, a 500-year flood event.

Water quality questions: 772-1539

Leaks, low pressure, meter problems,  
billing information: 772-1528

Department of Public Works Office Hours:  
Mon. - Fri.: 7:00 am to 5:00 pm,

EPA's Safe Drinking Water Hotline: 1-800-426-4791

VOLUME X • REPORTING YEAR 2012

PUBLIC WATER SUPPLY # 1114000

## Did you know?...

On an annual basis, over 2,900 individual tests are performed on Greenfield's drinking water.

These tests include analysis of the source waters for a wide variety of substances such as pesticides, inorganic compounds and radioactive substances.

Daily, the water that leaves the treatment plant is tested for bacteria, pH, turbidity and chlorine residual. Monthly, over 30 bacteriological tests are performed on the water from all sections of town to insure that the water maintains high quality as it travels through miles of distribution lines.



## Water conservation tips

**Ultra-low-flush toilets**, which cost as little as \$100 to over \$250 depending on the type purchased, use only about 1.6 gallons of water per flush. That could cut your family's total indoor water use by as much as 20%!

**Check every faucet in the house for leaks and be sure the toilets are not running.** A single dripping faucet can waste far more water in a single day than one person needs for drinking in an entire week! If you are sure you don't have any leaks inside your home, but still hear water running, there maybe a leak in your service connection (the line from the street to your house). Call the DPW at 772-1528 to have this checked.



## Where does your water go?

On average, each Greenfield resident uses 100 gallons of water every day. You can reduce your water use by as much as 30% if you are efficient!

- ★ 27% Toilet flushing
- ★ 21% Laundry
- ★ 19% Shower & Bath
- ★ 16% Faucets
- ★ 14% Leaks
- ★ 2% Other
- ★ 1% Dishwashing



**SUBSTANCES DETECTED** Below are substances that were detected in the Town's drinking water during the years listed next to the parameter. None of these substances were detected above the allowable limit.

### CHEMICAL PARAMETERS

Substance/year	Units	Highest Level Allowed (EPA's MCL)*	Highest Level Detected	Range of Detected Levels	Ideal Goals (EPA's MCLG)*	Major Sources in Drinking Water
Nitrate '12	ppm	10.0	0.34	0.26 - 0.34	10.0	Runoff from fertilizer use; Erosion of natural deposits.
Chlorine '12	ppm	MRDL = 4	1.94	0.20 - 1.94	MRDLG = 4	Water treatment chemical used to control microbes
Total Trihalomethanes '12	ppb	80	14.4 Annual average	8.6 - 20.0	0	Disinfection by-products
Haloacetic Acids '12	ppb	60	9.0 Annual average	1.0 - 14.0	N/A	Disinfection by-products
Turbidity* '12	NTU	Treat tech* = 1	0.36	.03 - 0.36	none	Soil runoff
Lead '11	ppb	Action level* = 15	2.9 90th percentile	0.5 - 12.0 no exceedance	0	Household plumbing and service connections
Copper '11	ppm	Action level* = 1.3	0.99 90th percentile	0.046 - 1.40 1 site > 1.30	1.3	Household plumbing and service connections
Sodium '12	ppm	20	3.6	3.6	N/A	Runoff from stormwater
Sulfate '09	ppm	N/A	47	10.0 - 47.0	N/A	Natural sources

### DEFINITIONS:

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

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

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**ppm:** One part per million (this would be one penny in 10,000)

**ppb:** One part per billion (one penny in \$10,000,000)

**\*Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

**\*Action Level:** The concentration of a contaminant that triggers treatment or other requirement that a water system must follow. Action levels are reported at the 90th percentile for homes at greatest risk.

**\*Turbidity:** Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

### Are there any precautions some of our customers should consider?

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 particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/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 (800-426-4791).

### The Town is mandated by EPA to include the following generic language about the health effects of certain contaminants and drinking water sources:

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 dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or 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 urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;

**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 storm water runoff and septic systems;**

**Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

**Regarding lead...** 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. The Greenfield DPW 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. If you would like your water tested for lead at no charge please call the DPW at 413-772-1539. Additional 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>