

## 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.

### What is a Cross Connection? What Can I do about it?

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home.



For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of fire hydrant use in the town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow-prevention device can prevent this problem.

The DPW recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town. For additional information on cross connections and on the status of your water system's cross connection program, please contact the DPW at 413-772-1539.

### WATER CONSERVATION TIP...

**Ultra-low-flush toilets**, which cost from under \$100 to over \$200 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%!



**TROPICAL STORM IRENE** On August, 28, 2011 high flows caused by Tropical Storm Irene overtopped the Green River dam, caused 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 20% 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 not comprised. The water line was reestablished in October and the permanent repair to the dam will be complete by April 2012 at an estimated cost of \$1,900,000, 75% of which will be eligible for FEMA reimbursement.

In order to address damage to the covered bridge the Town has retained Dubois & King, an engineering firm that has extensive experience in covered bridge design and construction, to design the repair to the historic bridge. The bridge was swept off one of its abutments and sustained some structural damage as well during the flood.



# WATER QUALITY REPORT 2011

GREENFIELD, MASSACHUSETTS  
MAYOR WILLIAM MARTIN

**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**

*Green River dam breached by Tropical Storm Irene on August 28, 2011 when the Green River reached 500 year flood event at this location.*

**VOLUME IX • REPORTING YEAR 2011  
PUBLIC WATER SUPPLY # 1114000**

**Our pediatrician informed us our child has an elevated lead level in her blood. Can we have our water tested to determine if it is the source of the problem?**

Yes. Harmful levels of lead in drinking water are almost never found in the water source. However, in between the source of your water and your faucet is a series of pipes and connections, including the plumbing in your own home that can contribute to the problem. Previous testing has revealed few cases where there was an elevated lead level in our customer's tap water, but if you would like the water in your home tested, please call 772-1539 for further details. There is no charge for this service.

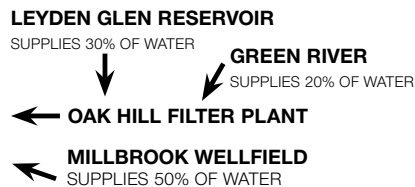


**What's New in My Water System?  
RESANDING THE OAK HILL FILTER BEDS**



The Oak Hill Filtration Plant, originally built in 1935 and upgraded to meet current standards, continues to be the workhorse of the water system. Water from the Leyden Glen Reservoir and Green River is filtered through slow sand filters at the site and disinfected with chlorine before entry into the distribution system. The filters are cleaned of accumulated sediments 2-3 times a year. Every 18-22 years the sand in these underground filters must be replenished. Because the filters are underground with limited accessibility, the resanding is a manual operation. This past summer the DPW hired nine summer workers who, with wheelbarrows and shovels, moved over 5000 tons of sand!

**Greenfield Water Supply  
Average daily consumption 1,750,500 gallons**



**Concerned your water bill is high?**

You may have a leak! Call the DPW at 772-1528 and we will send a licensed water operator to your home or business to perform a free leak check.



**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 '11	ppm	10.0	0.34	0.12 - 0.34	10.0	Runoff from fertilizer use; Erosion of natural deposits.
Chlorine '11	ppm	MRDL = 4	2.86	0.21 - 2.86	MRDLG = 4	Water treatment chemical used to control microbes
Total Trihalomethanes '11	ppb	80	16.2 Annual average	9.6 - 22.0	0	Disinfection by-products
Haloacetic Acids '11	ppb	60	8.1 Annual average	3.3 - 13.0	N/A	Disinfection by-products
Turbidity* '11	NTU	Treat tech* = 1	1.53	.03 - 1.53	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 > 1.3	1.3	Household plumbing and service connections
Sodium '11	ppm	20	14	2.6 - 14.0	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>