



2009 Report to Consumers on Water Quality

Devens, Massachusetts Public Water System #2019001

Dear Customer,

We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that all utilities issue an annual “Consumer Confidence” report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains and the risks our water testing and treatment are designed to prevent. MassDevelopment is committed to providing you with the safest and most reliable water supply. Informed consumers are our best allies in maintaining safe drinking water.

Devens Massachusetts drinking water meets or surpasses all federal and state drinking water standards.

OVERVIEW

MassDevelopment provides high quality ground water to customers in the Devens Regional Enterprise Zone. Securing the quality and safety of this resource is extremely important to us.

WATER SOURCE AND TREATMENT

The Devens water supply system consists of three gravel packed wells: the Patton, Shabokin and MacPherson wells and the well field at the Grove Pond pumping station. We are currently in the process of a 5 year capital improvement plan to rehabilitate or replace all 4 wells. In October of 2008, the newly built Patton Well was put into service. The Shabokin replacement well was placed in service in September of 2009. The MacPherson Well rehabilitation is currently underway and will be completed in September of 2010. We are adding additional water treatment equipment at the new wells to update and improve the corrosion control and disinfection measures used to treat the Devens water supply. Iron and manganese are often present in groundwater at levels that can discolor the water, or cause it to take on unpleasant odors or tastes. Even though it is still safe to drink, treatment is often desired. Treatment consists of adding sodium hexametaphosphate to water. This results in a chemical reaction known as sequestration and prevents iron and manganese from forming nuisance particles. The phosphate treatment also provides a coating to distribution mains that reduces corrosion. An additional new process for corrosion control is the addition of Potassium Hydroxide (KOH) to raise the pH of the water chemistry to bring our water up to a less corrosive state that is neutral or slightly alkaline. All chemicals used for this process are approved for water treatment by one of the following organizations: National Sanitation Foundation (now known as NSF International) or UL. Both are accredited by the American National Standards Institute (ANSI). Chemicals also must meet standards established by the American Water Works Association. In addition to new chemical treatment processes, the new wells are also designed to improve security measures by installing fencing and upgraded alarm features at the new wells.

It is necessary to disinfect all reservoirs and some ground water sources to eliminate disease-carrying organisms. Nationally, EPA has found that these water sources contain numerous microorganisms, some of which can cause health problems if ingested. Disinfection destroys harmful organisms. Sterilization kills all microorganisms, even though most are not harmful, and is too costly to use on a routine basis. The Devens water system uses sodium hypochlorite (NaOCl) as its disinfectant. Chlorine destroys organisms by penetrating cell walls and reacting with enzymes. Disinfection with chlorine has proven to be effective at ensuring that water is safe to drink. The Devens water supply has a permit to pump up to 5 million gallons per day. The Devens system also has two 1 million-gallon storage tanks and more than 50 miles of water mains. MassDevelopment contracts the operations and maintenance of the water system to one of the world's largest O&M contractors of water systems, United Water.

WATER QUALITY DATA TABLE

The following table shows the results of our water quality analysis during 2009 or during the most recent monitoring period for the water we supplied. Every regulated and unregulated contaminant that was detected in the water, even in the minutest traces, is listed here. All of the data below is from sampling of the water supplied by the MassDevelopment/Devens Water System.

Regulated Contaminants	Year Sampled	Highest Detect or Highest RAA*	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources in Drinking Water
Inorganic Contaminants							
Arsenic (ppb)	2009	8	ND - 8	10	--	N	Erosion of natural deposits
Barium (ppm)	2009	0.007	ND - 0.007	2	2	N	Erosion of natural deposits
Nitrate (ppm)	2009	0.34	0.06 - 0.34	10	10	N	Runoff from fertilizer use; erosion of natural deposits
Disinfectants							
Chlorine (ppm)	Monthly in 2009	0.26*	0.21 - 0.29	4	4	N	Water additive to control microbes
Radioactive Contaminants							
Alpha emitters (pCi/l)	Quarterly in 2009	3.9	ND - 3.9	15	0	N	Erosion of natural deposits
Radium 226 & 228 (pCi/l) (combined activity)	Quarterly in 2009	0.99	ND - 0.99	5	0	N	Erosion of natural deposits

* Highest RAA = highest running annual average of four consecutive quarters.

Lead and Copper	Year Sampled	90 th Percentile*	Action Level (AL)	MCLG	# of Sites Sampled	# of Sites Above the AL	Possible Source of Contamination
Lead (ppb)	2009	3	15	0	20	0	Corrosion of interior plumbing materials
Copper (ppm)	2009	0.3	1.3	0	20	0	Corrosion of interior plumbing materials

* Lead and copper compliance is based on the 90th percentile value, which is the highest level found in 9 out of every 10 sites sampled. This number is then compared to the action level for each contaminant.

Secondary and Unregulated Contaminants	Year Sampled	Range Detected	Average	SMCL	ORSG	Possible Source of Contamination
Iron (ppb)	2009	ND-60	30	300		Naturally occurring; corrosion of cast iron pipes
Manganese (ppb)	2009	93-139	116	50		Erosion of natural deposits
Sulfate (ppm)	2008	7.8-35	21.4	250	--	Natural sources
Zinc (ppm)	2008	0.03-0.65	0.34	5	--	Erosion of natural deposits
Sodium (ppm)*	2009	7.3 - 14.4	10.8	--	20	Natural sources; runoff from road salt

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

Coliform	Highest # Positive in a month	Total # Positive	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Total Coliform	1	1	1	0	N	Naturally present in the environment

Unregulated Contaminants (Testing not required): Devens, MA did not test for Cryptosporidium, or Radon

DEFINITIONS:

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

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

ppm: Parts per million, or milligrams per liter (mg/l).

ppb: Parts per billion, or micrograms per liter (ug/l).

pCi/l: Picocuries per liter (a measure of radioactivity).

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

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 (ex. Chlorine, chloramines, chloride dioxide).

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

Secondary Maximum Contaminant Level (SMCL): These standards are developed to protect the aesthetic qualities of drinking water and are not health related.

Unregulated Contaminants: Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Office of Research and Standards Guideline (ORSG): This is the concentration of a chemical in drinking water, at or below which, adverse health effects are likely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

SOURCE WATER ASSESSMENT PROGRAM REPORT (SWAP)

In 2003, the Massachusetts Department of Environmental Protection completed a SWAP report for the Devens Water System. The report is a planning tool to support local and state efforts to improve water supply protection. Your source water is provided from 3 gravel packed wells at Sheboken Well, MacPherson Well, and Patton Well and 1 well field at Grove Pond. They are protected by the establishment of protective barriers known as Zone I and Zone II areas.

Source Protection Recommendations:

To better protect our sources for the future, DEP recommended that we:

- Continue to inspect the Zone I's regularly and where possible, obtain complete ownership of the Zones.
- Educate residents on ways they can help protect drinking water sources.
- Work with emergency response teams to ensure they are aware of the storm water drainage in our Zone II and to cooperate on responding to spills and accidents.
- Develop and implement a Wellhead Protection Plan.

A copy of the SWAP report may be obtained at the Devens Utilities office at 33 Andrews Parkway, Devens MA.

ADDITIONAL HEALTH INFORMATION

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

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 dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

While your drinking water meets the standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems."

Some people may be more vulnerable to contaminants in drinking water than is 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* or additional information on lead risks are available from the Safe Drinking Water Hotline (800-426-4791).

The Devens PWS recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. This will prevent a potential cross connection between town water and a polluted source such as a lawn fertilizer sprayer connected to a garden hose. You can purchase the device at a hardware store or plumbing supply store. For additional information on the Devens cross connection control program call (978) 784-2931.

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

NATIONAL PRIMARY DRINKING WATER REGULATION COMPLIANCE

This report was prepared with the technical assistance provided by the American Water Works Association, the MA Department of Environmental Protection and Earth Tech.

We'll be happy to answer questions about Devens, Massachusetts' water quality or provide additional copies of this report. Call Jim Moore at (978) 784-2931 or visit www.devenscommunity.com.

*El informe contiene informacion importante sobre la calidad del agua en su comunidad.
Traduzcalo o hable con alguien que lo entienda bien.*