

2010 Water Quality Report for City of Lowell and Lowell Charter Township

This report covers the drinking water quality for The City of Lowell and Lowell Township Water for the calendar year 2010. This information is a snapshot of the quality of the water that we provided to you in 2010. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from 4 groundwater wells, each over 87 feet in depth, drawing from the Grand River watershed. They are located at 1596 Bowes Road in Lowell behind the water plant. The State performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to very-high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is moderate. (See Table 1.) We have no significant sources of contamination. We are making efforts to protect our sources by maintaining a wellhead protection program. A copy of the full Source Water Assessment can be obtained by contacting George Regan at the Lowell Water Treatment Plant, 1596 Bowes Rd., Lowell, MI 49331 or call at 616-897-5234.

- **Contaminants and their presence in water:** 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).
- **Vulnerability of sub-populations:** 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 systems 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).

- **Sources of drinking water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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 from human activity.
- Contaminants that may be present in source water include:
 - T **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
 - T **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
 - T **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.
 - T **Radioactive contaminants**, which are naturally occurring or be the result of oil and gas production and mining activities.
 - T **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, and septic systems.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2010 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2010. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.

Terms and abbreviations used below:

Water Supplier: Define only the terms you use in the table below. Delete any you don't use.

- **Maximum Contaminant Level Goal (MCLG):** 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.
- **Maximum Contaminant Level (MCL):** 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.
- **N/A:** Not applicable **ND:** not detectable at testing limit **ppb:** parts per billion or micrograms per liter **ppm:** parts per million or milligrams per liter **pCi/l:** picocuries per liter (a measure of radioactivity).
- **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Regulated Contaminant	MCL	MCLG	Highest Level Detected	Range	Sample Date	Violation Yes / No	Typical Source of Contaminant
Nitrate (ppm)	10	10	1.2		06/22/10	No	Run off from fertilizer use and erosion of natural resources
Total Trihalomethanes (ppm)	0.080	0.080	0.0027		06/22/10	No	Organic and chlorination by-products
Fluoride (ppm)	4	4	0.95		06/22/10	No	Erosion of natural deposits. Discharge from fertilizer and aluminum factories
Radioactive Contaminant	MCL	MCLG	Highest Level Detected	Range	Sample Date	Violation Yes/No	Typical Source of Contaminant
Alpha emitters (pCi/l)	15	0	<3		10/31/00	No	Erosion of natural deposits
Ra226/228 (pCi/L)	5	None	<1		5/13/03	No	Erosion of natural deposits

Unregulated Contaminant **		Single Sample Test	Range	Sample Date	Typical Special Monitoring and Source of Contaminant	
Sodium (ppm)		16		06/22/10	Erosion of natural deposits	
Contaminant Subject to AL	Action Level	90% of Samples ≤ This Level		Sample Date	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	<0.003	NA	7/14/10	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppb)	1300	<0.010	NA	7/14/10	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

LEAD: If present, elevated levels of lead can cause serious health problems, especially for pregnant and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Lowell 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

** Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Microbial Contaminants	MCL	MCLG	Number Detected	Violation Yes / No	Typical Source of Contaminant
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples positive)	0	0	No	Naturally present in the environment
Fecal Coliform and <i>E. coli</i>	Routine and repeat sample total coliform positive, and one is also fecal or <i>E. coli</i> positive	0	0	No	Human and animal fecal waste

Table 1

Distribution System Regulated Contaminant
Source Water Assessment

Sample point	Test Result	Analyte Name	Tested	Limit MCL	Rpt Limit
Plant Tap	0.0027 mg/l	Max Potential Trihalomethanes	6/22/10	0.08 mg/l	0.0004 mg/l
Sample Hydrant	0.0180 mg/l	Max Potential Trihalomethanes	6/17/08	0.08 mg/l	0.0004 mg/l

CHLORINE RESIDUALS:

"Maximum residual disinfectant level, or MRDL (4.0mg/l), means 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, or MRDLG (4.0mg/l), means the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants."

"RAA is the running annual average".

Previous Year 2009

Chlorine (ppm)	J	F	M	A	M	J	J	A	S	O	N	D
Bacteriological sample site #1				0.52	0.47	0.47	0.47	0.48	0.51	0.56		0.58
Bacteriological sample site #2				0.32	0.32	0.33	0.24	0.24	0.30	0.36	0.46	0.44
Bacteriological sample site #3				0.48	0.39	0.47	0.43	0.48	0.42	0.47	0.47	0.54
Monthly average of samples				0.44	0.39	0.42	0.38	0.40	0.41	0.46	0.47	0.52

Year Covered by the CCR 2010

Chlorine (ppm)	J	F	M	A	M	J	J	A	S	O	N	D
Bacteriological sample site #1			0.56	0.56	0.53	0.53	0.38	0.44	0.53	0.54	0.51	0.56
Bacteriological sample site #2	0.35	0.44	0.39	0.19	0.16	0.24	0.16	0.12	0.28	0.35	0.38	0.36
Bacteriological sample site #3	0.40	0.52	0.51	0.50	0.41	0.53	0.38	0.43	0.31	0.42	0.38	0.49
Monthly average of samples	0.38	0.48	0.49	0.42	0.37	0.43	0.31	0.33	0.37	0.44	0.42	0.47
RAA computed quarterly			0.436			0.434			0.419			0.409

RAA 2010 quarterly	0.436	0.434	0.419	0.409
RAA 2010	0.436	0.434	0.419	0.409

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

Monitoring and Reporting Requirements: The State and EPA require us to test our water on a regular basis to ensure its safety. **We met all monitoring and reporting requirements for 2010.**

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at Lowell City Hall, 301 East Main, Lowell, Michigan and at Lowell Township Offices, 2910 Alden Nash S.E., Lowell, Michigan. This report will not be sent to you.

We invite public participation in decisions that affect drinking water quality. Lowell City Council meetings are held on the first and third Mondays of the month at 7:30pm in the Council Chambers at Lowell City Hall, 301 E. Main, Lowell, MI. Lowell Township meetings are held at 7:00pm on the first and third Mondays of each month at the Lowell Township Hall, 2910 Alden Nash S.E., Lowell, MI. For more information about your water, or the contents of this report, contact George Regan at 897-5234. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.

Lowell Charter Township Chlorine Residuals

Previous Year-2009

Chlorine (ppm)	J	F	M	A	M	J	J	A	S	O	N	D
Bacteriological Site #1					0.41	0.31				0.28	0.35	0.3
Bacteriological Site #2				0.56	0.61		0.31	0.5	0.4	0.34	0.36	0.41
Bacteriological Site #3				0.5	0.55	0.34	0.27	0.29	0.22	0.21		0.38
Bacteriological Site #4				0.08	0.13	0.22	0.29	0.35	0.18	0.3	0.27	0.4
Source Water				0.62	0.62	0.58	0.6	0.29	0.51	0.57	0.61	0.58
Monthly Average of Samples				0.44	0.46	0.36	0.37	0.36	0.33	0.34	0.40	0.41

Year Covered by the CCR-2010

Chlorine (ppm)	J	F	M	A	M	J	J	A	S	O	N	D
Bacteriological Site #1		0.55	0.44		0.29	0.18				0.25	0.3	0.23
Bacteriological Site #2	0.46	0.51	0.54	0.51	0.42	0.38	0.34	0.31	0.31	0.42	0.39	0.29
Bacteriological Site #3	0.47	0.49	0.48	0.44	0.3	0.23	0.24	0.26	0.18	0.21	0.26	0.22
Bacteriological Site #4	0.5	0.47	0.41	0.39	0.2	0.19	0.17	0.2	0.17	0.29	0.3	0.36
Source Water	0.59	0.66	0.6	0.57	0.06	0.51	0.51	0.55	0.6	0.44	0.56	0.53
Monthly Average of Samples	0.51	0.54	0.49	0.48	0.25	0.30	0.32	0.33	0.32	0.32	0.36	0.33
RAA Computed Quarterly			0.418			0.398			0.391			0.379

Disinfectant Residual Total	Unit	MCL	MCLG	Highest Level Detected	Range Detected	Sample Dates	Violation	Typical Source Of Contaminant
Trihalomethanes	ppb	80	NA	7.1	6.4 - 7.1	2/2/2010	No	Byproduct of Chlorination
Total Haloacetic Acids (HAA5)	ppb	60	NA	1.89	1.82 - 1.89	2/2/2010	No	Byproduct of Chlorination

Lead & Copper	Unit	MCL	Action Level	90% Samples ≤ this level	# of Samples Exceeding AL	Sample Date	Exceeds AL	Typical Source Of Contaminant
Lead	ppb	0	15	<3.0	0	7/14/2010	0	Corrosion of Household Plumbing
Copper	ppb	1300	1300	16	0	7/14/2010	0	Corrosion of Household Plumbing