

# CITY OF LOVELAND

## 2011 WATER QUALITY REPORT

**ORIGIN OF OUR WATER** – Water for the City of Loveland is pumped from the ground at the wellfield at BettyRay. There are three wells at that location, each of which is capable of producing 1,300 GPM (gallons per minute). Each well is approximately 85 feet deep and taps into a natural aquifer (an aquifer is an underground formation of sand, gravel and rock where water fills empty spaces). These wells are capable of producing 5,000,000 gallons of groundwater a day. The water is treated on site with chlorine and fluoride before it is pumped to consumers. The City of Loveland has emergency interconnections with the City of Cincinnati and Clermont County.

**WATER QUALITY CHARACTERISTICS** - Although our water is tested daily, weekly, and monthly for many contaminants, some testing is required infrequently. For example, the testing frequency for many inorganic contaminants is every three years. If a contaminant was not tested for in 2011 but was detected within the past five years, the testing date would be listed in the table under the “Year Sampled” column. All testing data represents the most recent testing in accordance with regulations. Enclosed is a table of contaminants of treated water from the Water Treatment Plant. Abbreviations included in the table are defined as follows. **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. **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. **AL** (action level) – The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow. **ppm** – parts per million or milligrams per liter. **ppb** – parts per billion or micrograms per liter. **pCi/L** – Picocuries per liter. **MRDLG** (maximum residual disinfectant level goal) – the level of residual disinfectant below which there is no known or expected risk to health. **MRDL** (maximum residual disinfectant level) – the highest disinfectant level allowed.

**SOURCES OF CONTAMINATION TO DRINKING WATER** - According to the Ohio EPA, “The sources of drinking water, both tap 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 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 water 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 urban storm water runoff, and residential uses; (D) 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; (E) 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. FDA 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 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 Environmental Protection Agency’s Safe Drinking Water Hotline (1-800-426-4791).”

**HEALTH CONCERNS** - According to the Ohio EPA, “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 infection. 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 (1-800-426-4791).”

**COMMUNITY INPUT** – Loveland City Council would like to hear your comments and concerns about the City’s drinking water system. Council meetings are held at 8:00 PM on the second and fourth Tuesdays of each month. The meetings are held Loveland City Hall, 120 W. Loveland Avenue. Those who wish to address Council may sign up prior to the start of each meeting and will be given the opportunity to comment.

You are also invited to contact Scott Wisby, Public Works Director at (513) 707-6115 for water quality or pressure information. For after-hours emergencies, please call the dispatcher at (513) 677-7000. To request water and sewer service or for billing inquiries, please call (513) 683-0150, Ext. 1012.

## 2011 WATER QUALITY CONTAMINANTS – CITY OF LOVELAND

Contaminant	Units	Range Detected	Level Found	MCL	MCLG	Violation	Year Sampled	Typical Sources of Contamination
<b>Volatile Organic Contaminants</b>								
Total Trihalomethanes	Ppb	N/A	25.7	80	0	No	2011	By-product of drinking water chlorination
IDSE Total Trihalomethanes	Ppb	<2 – 25.5	N/A	80	0	No	2008	By-product of drinking water chlorination
Bromoform	Ppb	N/A	2.3	Unregulated	Unregulated	No	2011	By-product of drinking water chlorination
Chloroform	Ppb	N/A	7.2	Unregulated	Unregulated	No	2011	By-product of drinking water chlorination
Dibromochloro-Methane	Ppb	N/A	7.5	Unregulated	Unregulated	No	2011	By-product of drinking water chlorination
Bromodichloro-methane	Ppb	N/A	8.7	Unregulated	Unregulated	No	2011	By-product of drinking water chlorination
Haloacetic acids (HAA)	Ppb	N/A	<6	60	Unregulated	No	2011	By-product of drinking water disinfection
IDSE Haloacetic acids (HAA)	Ppb	<6 - 8.02	N/A	60	Unregulated	No	2008	By-product of drinking water disinfection
<b>Synthetic Organic Contaminants</b>								
Alachlor	Ppb	N/A	<0.1	2	0	No	2011	Runoff from herbicide used on row crops
Atrazine	Ppb	N/A	<0.07	3	3	No	2011	Runoff from herbicide used on row crops
Simazine	Ppb	N/A	<0.05	4	4	No	2011	Herbicide Runoff
<b>Radioactive Contaminants</b>								
Alpha emitters	pCi/l	N/A	<3	15	0	No	2008	Erosion of natural deposits
Combined radium	pCi/l	N/A	1	5	0	No	2008	Erosion of natural deposits
<b>Residual Disinfectants</b>								
Total Chlorine	Ppm	.76 – .97	.90	MRDL = 4	MRDLG = 4	No	2011	Water additives used to control microbes
<b>Inorganic Contaminants</b>								
Copper*	Ppm	0.053 – .892	.61	AL=1.3	1.3	No	2010	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
								Zero samples out of thirty were found to have a copper level in excess of the Action Level of 1.3 ppm
Lead*	Ppb	<5 – 9.45	6.22	AL=15	0	No	2010	Corrosion of household plumbing systems; erosion of natural deposits
								Zero samples out of thirty was found to have a lead level in excess of the Action Level of 15 ppb
Fluoride	Ppm	.83 – 1.23	1.10	4	4	No	2011	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	Ppm	N/A	1.46	10	10	No	2011	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

**PURPOSE AND MONITORING REQUIREMENTS OF IDSE** – Under the Stage 2 Disinfectants / Disinfection Byproducts Rule (D/DBPR), our public water system was required by USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and is intended to identify locations in our distribution system with elevated disinfection byproduct concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR, beginning in 2012. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAA5s.

**SUSCEPTIBILITY ANALYSIS** - The Ohio EPA has completed a study on Loveland's drinking water source to identify potential contaminants and provide guidance on protecting the drinking water source. According to this study, the aquifer that supplies water to the City of Loveland has a high susceptibility to contamination. This determination is based on the following: 1) lack of a protective layer of clay/shale/or other low permeability material overlying the aquifer; 2) shallow depth (less than 20-30 feet below ground surface) of the aquifer; 3) and the presence of manmade contaminants in treated water. Nitrates have been detected in the treated water, an impact from land use activities, but the concentrations are well below the federal and state drinking water standard of 10 ppm. The risk of future contamination can be minimized by implementing appropriate protective measures. More information about the source water assessment or what consumers can do to help protect the aquifer is available by calling Scott Wisby, Public Works Director, at (513) 707-6115.

**IT'S YOUR UTILITY** - We at the City of Loveland take our responsibility very seriously when it comes to providing you with the safest water possible. Your input is valuable to us and is welcome at any time by calling City of Loveland at (513) 683-0150. Any questions or comments regarding this report may be directed to Scott Wisby, Public Works Director, at (513) 707-6115.