

# 2012 Annual Water Quality Report

## Dear Customer:

Superior Water Light & Power Company (SWL&P) is committed to providing residents with a safe and reliable supply of high quality drinking water. We test our water using sophisticated equipment and advanced procedures. SWL&P water meets state and federal standards for both appearance and safety. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tells you where your water comes from, what our tests show about it, and other things you should know about drinking water.

**Is our water safe to drink? Absolutely, Superior Water Light & Power Company has never had a violation of contaminant levels.**

## Overview

### Water Source

SWL&P's raw water source is considered to be surface water from Lake Superior. We have well screens buried in the sand on the lake side of Minnesota Point.

### An Explanation of the Water Quality Table

The table shows the results of our water quality analysis. Every regulated contaminant that we detected in the water, even in the minutest traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurements. The definitions of MCL and MCLG are important.

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

**Maximum Contaminant Level Goal or 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.

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

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

### Key to Table

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

- AL** Action Level.
- MCL** Maximum Contaminant Level.
- MCLG** Maximum Contaminant Level Goal.
- TT** Treatment Technique.
- NTU** Nephelometric Turbidity Units (measure of the clarity of the water). Turbidity of 5 NTU is just noticeable to the average person.
- ppm** Parts per million or milligrams per liter. One part per million corresponds to one minute in two years or a single penny in \$10,000.
- ppb** Parts per billion or micrograms per liter. One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.
- pCi/l** Picocuries per liter (a measure of radioactivity).
- nd** Non-detects. Laboratory analysis indicates that the constituent is not present.
- n/a** Not applicable.

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**Although we ran many tests, only the listed substances were found. They are all below the MCL required.**

Contaminant (unit of measure)	Date Tested	MCL	MCLG	Detected Level	Range	Typical Sources of Contaminant	Violation
<b>VOLATILE ORGANIC CONTAMINANTS</b>							
TTHMs (ppb)	2012	80	0	21.5 avg.	10.0 to 43.0	By-product of drinking water chlorination	NO
<b>UNREGULATED CONTAMINANTS</b>							
Bromodichloromethane (ppb)	2012	n/a	n/a	3.50	2.40 to 4.60	n/a	NO
Chloroform (ppb)	2012	n/a	n/a	19.63	7.50 to 38.00	n/a	NO
Dibromochloromethane (ppb)	2012	n/a	n/a	0.34	ND to 0.51	n/a	NO
Sulfate (ppb)	2012	n/a	n/a	5.20	5.20	n/a	NO
<b>DISINFECTION BYPRODUCTS</b>							
HAA5 (ppb)	2012	60	60	15.7 avg.	9.6 to 26.0	n/a	NO
<b>INORGANIC CONTAMINANTS</b>							
Copper (ppm)	2011	AL=1.3	1.3	0.065	0 of 30 results were above the action level	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	NO
Fluoride (ppm)	2012	4.0	4.0	0.1	0.1	Erosion of natural materials; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	NO
Nitrate (ppm)	2012	10	10	0.36	0.36	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NO
Lead (ppb)	2011	AL=15	0	8.2	1 of 30 results were above the action level	Corrosion of household plumbing systems; erosion of natural deposits	*
Barium (ppm)	2012	2	2	0.010	0.010	Discharge of drilling wastes; discharge from metal refineries; erosion from natural deposits	NO

Contaminant (unit of measure)	Date Tested	MCL	MCLG	Detected Level	Range	Typical Sources of Contaminant	Violation
<b>INORGANIC CONTAMINANTS (continued)</b>							
Nickel (ppb)	2012	100		0.67	0.67	Nickel occurs naturally in soil, ground water and surface waters, and is often used in electroplating, stainless steel and alloy products	NO
Sodium (ppm)	2012	n/a	n/a	4.0	4.0	n/a	NO
Cyanide (ppb)	2011	200	200	30	30	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	NO
Chromium (ppm)	2010	100	100	1	1	Discharge from steel and mills; erosion of natural deposits	NO
<b>MICROBIAL CONTAMINANTS</b>							
a) Total Coliform Bacteria	2012	Presence of coliform in 5% of monthly samples	0	0	n/a	Naturally present in the environment	NO
Fecal Coliform/E.coli	2012	A routine sample and repeat sample are total positive and one is also fecal or E.coli positive	0	0	n/a	Human and animal fecal waste	NO
b) Turbidity (NTU)	2012	TT=1 NTU max. TT<0.3 NTU in at least 95% of all samples	0	<0.3 NTU 100% of the time	n/a	Soil runoff	NO
<b>RADIOACTIVE CONTAMINANTS</b>							
Gross Alpha Excel.R & U (pCi/L)	2008	n/a	n/a	2.7	2.7	Erosion of natural deposits	NO
Radium, (226+228) (pCi/L)	2007	5	0	0.4 avg.	nd to 1.7	Erosion of natural deposits	NO

## Water Quality Table Footnotes

\* *Systems exceeding a lead and/or copper action level must take actions to reduce lead and/or copper in the drinking water. The lead and copper values represent the 90th percentile of all compliance samples collected. If you want information on the NUMBER of sites or the actions taken to reduce these levels, please contact your water supply operator.*

a) *We test 35 samples per month from our distribution system and one sample every day of water entering the distribution system, and all have tested negative for coliform bacteria.*

b) *In accordance with s. NR 810.29, Wisconsin Administration Code, the treated surface water is monitored for turbidity to confirm that the filtered water is less than or equal to 0.3 NTU in at least 95 % of the measurements taken each month and never exceeds 1 NTU. In 2012 the highest single entry point turbidity measurement was .18 NTU. The lowest monthly percentage of samples meeting the turbidity limits was 100%.*

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, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from 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 minerals, which can be occurring naturally or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- 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, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same level of protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 are available from the Safe Drinking Water Hotline (800-426-4791).

### Other Useful Information

**Lead:** *Infants and young people are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested by an independent lab and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline.*

We at Superior Water Light and Power Company are interested in your questions and comments. If you'd care to contact us by letter, send your questions and/or comments to:

**Donald Vollmer**  
**Superior Water Light & Power Co.**  
**P.O. Box 519**  
**Superior, WI 54880**

You may also call Donald Vollmer at **715-398-3636** if you are interested in a more detailed report.