NEW REGIONAL REPORT

2003

brought to you by your community's dedicated water system professionals

Drinking Water Quality Report

for Customers Served by the Saginaw Water Treatment Plant

a message to WATER CONSUMERS

Your community is providing you with this new regional water quality report to help you learn more about the quality of the drinking water that comes out of your tap. This report offers important information to communities that purchase their water from the Saginaw Water Treatment Plant. This includes consumers served by the following community water utilities:

- Village of Birch Run
- Birch Run Township
- Blumfield Township
- Bridgeport Charter Township
- Buena Vista Charter Township
- Carrollton Township
- Denmark Township
- Frankenlust Township
- James Township
- Kochville Township
- Village of Reese
- Richville
- Saginaw Charter Township
- City of Saginaw
- Spaulding Township
- Swan Creek Township
- Taymouth Township
- Thomas Township
- City of Zilwaukee

This report covers drinking water quality test results for the year 2003. Please read this report thoroughly.

The goal of your drinking water professionals is to provide a safe and reliable supply of drinking water for all consumers. This report affirms that they achieved this goal throughout 2003.

By collaborating to prepare a regional report, your community leaders eliminated duplication, saving time and money for rate payers.

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

This new regional report eliminates duplication, saving time and money for water rate payers!

The Saginaw Water Plant performs additional (unrequired) tests to provide greater water quality assurance for all consumers

there is nothing more basic to life than quality drinking water

Quality Water at Your Tap: Supply

Your drinking water originates from Lake Huron, one of the largest and highest quality sources of fresh water in the world. The raw water is purchased from the Saginaw-Midland Municipal Water Supply Corporation. It travels a great distance and receives extensive treatment before it is delivered to your tap.

The raw water is drawn from Lake Huron through two intakes. These intakes are so large that a 5½-foot-tall person could stand up inside one! From there, the water travels 65 miles through reinforced concrete pipe to the Saginaw Water Treatment Plant. Treatment processes disinfect and purify the water at the plant. After treatment, the water is stored in two reservoirs until it is pumped into the distribution system.

Source Water Assessment: The State's assessment of our raw water supply (called a "Source Water Assessment") will be completed in 2004. Additional information about the assessment will be available from your local government office.

Quality Water at Your Tap: Treatment

Highly trained, certified staff work in the Laboratory at the Saginaw Water Treatment Plant. These qualified staff perform hundreds of tests in a certified laboratory every day. Water samples are taken daily from the Plant at each step in the treatment process to ensure high-quality drinking water. Samples are also obtained weekly from various locations throughout the distribution system.

Water samples are subjected to a battery of chemical and microbiological tests, including pH, alkalinity, color, chloride, iron, coliform bacteria, metals, and volatile organics. Many of these tests are required by law, but the Saginaw Water Treatment Plant also performs additional tests to provide greater water quality assurance. Annually, close to 100,000 analyses are performed on the water.

Plant Operations staff work around the clock to ensure that the water you drink meets or surpasses all Federal and State standards for quality and safety. These individuals operate the system using computerized control systems and by making manual adjustments. Operations and maintenance staff maintain the equipment, which allows the plant to perform more efficiently and reliably. Routine maintenance also prolongs the life of our equipment, which helps to keep your water rates as low as possible. These workers provide fresh tap water to nearly 180,000 people in the Saginaw region every day.

Quality Water at Your Tap: Distribution

Each community that purchases water from the Saginaw Water Treatment Plant is responsible for maintaining its distribution system. This includes testing for copper, lead, and bacteriological parameters, repairing water main breaks, and cleaning the system by flushing the mains on a regular basis. You can learn more about your community's water system by attending monthly meetings. See the back of this report for more information about meeting times.

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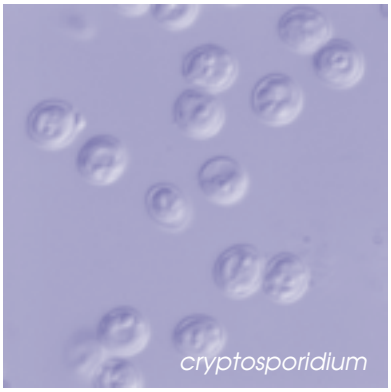

Cryptosporidium

In 1998, we participated in a major drinking water quality testing program called the Information Collection Rule (ICR). One of the contaminants we tested for was the parasite *Cryptosporidium*, which has caused intestinal disease in other parts of the country and overseas, but not in the Saginaw service area.

Cryptosporidium is commonly found in surface water, and is hard to kill. Even the best managed treatment plants may contain some live parasites. The United States Environmental Protection Agency (EPA) is working to resolve several scientific issues that will allow safety standards to be set for *Cryptosporidium*. Testing performed during 1998 revealed the presence of *Cryptosporidium* in a single sample of our Lake Huron raw water. We have continued to test for *Cryptosporidium* and it was detected in a single Lake Huron raw water sample in 2002.

Cryptosporidium has never been detected in our finished water, and no drinking water precaution is needed for the general public. If you have special health concerns, please read the paragraph below.

For People with Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those undergoing chemotherapy, who have undergone organ transplants, with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

Federal guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the EPA's Safe Drinking Water Hotline at 800.426.4791.

Nearly 100,000 tests are performed each year before, during, and after treatment to provide customers with safe drinking water!

Community-Specific Results

Certain water quality tests must be performed in each individual water distribution system. This includes lead, copper, and bacteriological testing. None of the communities in the Saginaw service area had bacteriological detects during 2003. For lead and copper, all communities in the Saginaw system participate in a coordinated test. This test is only required every three years because of favorable past results. The figures below are from the 2001 coordinated test; we will be testing again in 2004. Lead and Copper compliance is based on the 90th percentile, where 9 out of 10 samples must be below the Action Level (AL). All of the testing sites in the Saginaw service area were below the ALs for Lead and Copper. The likely sources of both copper and lead in your drinking water include corrosion of household plumbing and erosion of natural deposits.

Water Supplier	parameter	units	90th	MCLG	AL	violation?	# sites exceeding AL
Birch Run Township	Lead	ppb	1	0	AL=15	no	none
	Copper	ppm	.211	1.3	AL=1.3	no	none
Village of Birch Run	Lead	ppb	1	0	AL=15	no	none
	Copper	ppm	.174	1.3	AL=1.3	no	none
Blumfield/Reese	Lead	ppb	8	0	AL=15	no	none
	Copper	ppm	.23	1.3	AL=1.3	no	none
Bridgeport Township	Lead	ppb	0	0	AL=15	no	none
	Copper	ppm	.2	1.3	AL=1.3	no	none
Buena Vista Township	Lead	ppb	5.8	0	AL=15	no	none
	Copper	ppm	.271	1.3	AL=1.3	no	none
Carrollton Township	Lead	ppb	2.5	0	AL=15	no	none
	Copper	ppm	.199	1.3	AL=1.3	no	none
Frankenlust Township	Lead	ppb	3.5	0	AL=15	no	none
	Copper	ppm	.213	1.3	AL=1.3	no	none
James Township	Lead	ppb	0	0	AL=15	no	none
	Copper	ppm	.164	1.3	AL=1.3	no	none
Kochville Township	Lead	ppb	0	0	AL=15	no	none
	Copper	ppm	.234	1.3	AL=1.3	no	none
Saginaw Township	Lead	ppb	0	0	AL=15	no	none
	Copper	ppm	.248	1.3	AL=1.3	no	none
City of Saginaw	Lead	ppb	7	0	AL=15	no	none
	Copper	ppm	.15	1.3	AL=1.3	no	none
Spaulding Township	Lead	ppb	0	0	AL=15	no	none
	Copper	ppm	.129	1.3	AL=1.3	no	none
Swan Creek Township	Lead	ppb	2.5	0	AL=15	no	none
	Copper	ppm	.235	1.3	AL=1.3	no	none
Taymouth Township	Lead	ppb	0	0	AL=15	no	none
	Copper	ppm	.234	1.3	AL=1.3	no	none
Thomas Township	Lead	ppb	5.2	0	AL=15	no	none
	Copper	ppm	.236	1.3	AL=1.3	no	none
City of Zilwaukee	Lead	ppb	1	0	AL=15	no	none
	Copper	ppm	.263	1.3	AL=1.3	no	none

Maximum Contaminant Level (MCL) - The MCL is 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. MCLs are set at very stringent levels by the State and Federal government.

Nephelometric Turbidity Unit (ntu) - Measures drinking water clarity (the cloudiness of water).

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

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

nd - not detected. **na** - not applicable/available.

2003 Water Quality Results

The table below shows the results of the Saginaw Water Treatment Plant's water quality tests for 2003, unless otherwise noted. We met all the monitoring and reporting requirements for 2003, and had no violations. Our water met or surpassed all State and Federal water quality and safety standards. The State allows us to monitor for certain contaminants less than once per year because their concentrations are not expected to change year to year. Please start by reading the terminology below; it will help you to interpret the data. This table does not show the hundreds of contaminants we tested for, but did not detect in the water.

parameter	test date	unit	avg	range	MRDLG	MRDL	violation?	likely sources
Regulated Inorganic Parameters (sampled in the distribution system)								
Chlorine	2003	ppm	0.75	0.67 - 0.85	4	4	no	Water additive used to control microbials

parameter	test date	unit	avg	range	MCLG	MCL	violation?	likely sources
Regulated Inorganic Parameters (sampled at the plant's finished water tap)								
Fluoride	2003	ppm	0.56	0.11 - 1.22	4	4	no	Water additive to promote strong teeth
Barium	1995	ppm	0.03	na	2	2	no	Erosion of natural deposits
Nitrate	2003	ppm	0.5	na	10	10	no	Fertilizer runoff; septic tank leaching, sewage; erosion of natural deposits
Volatile Organic Parameters (sampled in the distribution system)								
TTHM[1]	2003	ppb	41.0	14.7 - 67.1	0	80	no	Byproducts of drinking water disinfection
HAA5[1]	2003	ppb	29.8	12.0 - 44.0	none	60	no	Byproducts of drinking water disinfection
Regulated Microbiological Parameters (sampled in the filtered water)								
Turbidity[2]	2003	ntu	0.035	.02 - .06	none	TT	no	Soil runoff, suspended matter in lake water
Unregulated Parameters (not regulated at the State or Federal Level)								

parameter	test date	unit	avg	range	MCLG	MCL	violation?	likely sources
Sodium[3]	2003	ppm	nd	nd	none	none	no	Naturally occurring
1998 Information Collection Rule (ICR) Findings (average of plant tap and distribution system samples) [4]								
HAN (Haloacetonitriles)	1998	ppb	3.3	2.5 - 4.2	none	none	no	Byproduct of drinking water disinfection
CH (Chloral Hydrate)	1998	ppb	6.7	2.0 - 15.0	none	none	no	Byproduct of drinking water disinfection
TOX (Total Organic Halide)	1998	ppb	113.7	nd - 165.0	none	none	no	Byproduct of drinking water disinfection

Total Organic Carbon Removal

Certain water systems must remove Total Organic Carbon (TOC) to reduce the formation of disinfection byproducts. TOC was measured each month and, because the level was low, there is no requirement for TOC removal from the Saginaw water supply.

Footnotes

1. *Averages shown for TTHM (Total Trihalomethanes) and HAA5 (Haloacetic Acids) are the highest running annual averages calculated quarterly.*
2. *Turbidity measures the cloudiness of water. As of January 1, 2002, turbidity in systems that provide filtration, like Saginaw, must never exceed 1 NTU, and must not exceed 0.3 NTU in more than 95% of daily samples in any month. All of our samples were below 0.3. This indicates that our treatment process is working effectively.*
3. *Information provided for those concerned with sodium in their diet.*
4. *On June 18, 1996, EPA passed the Information Collection Rule, which required certain water utilities to perform special monitoring and data reporting. The information will help EPA determine whether revisions need to be made to EPA's drinking water filtration and disinfection rule and to determine the need for new regulations.*

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of 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.

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.

Parts per million (ppm) and parts per billion (ppb) - One ppm can be equated to four teaspoons of salt in a standard 24-foot backyard pool. One ppb is one teaspoon of salt in an Olympic-sized pool.

Maximum Contaminant Level Goal (MCLG) - The MCLG is 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.

Cryptosporidium *has never been detected in our finished water*

Health and Safety Information

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline, 800.426.4791.

The sources of both tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive materials, and can also pick up substances resulting from animal 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
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture and residential uses
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, septic systems, and agricultural and urban runoff
- *Radioactive contaminants*, which are naturally occurring or the result of oil and gas production, or mining activities

To ensure that tap water is safe, the EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water, which must provide the same protection for public health.

2003 System-Wide Improvements

During 2003, the following major projects, repairs, or purchases of replacement parts were completed to improve the overall efficiency of the Saginaw Water Treatment System:

- Wholesale Customer Meter Base Remote Reading Capabilities $102,000 - *this project will improve billing accuracy and develop ongoing usage and consumption figures for all wholesale customers*
- Roofing Project III - Energy Shield $104,800
- Impeller HSP 7 and 8 $45,950
- Sludge Collection Equipment $167,100
- Lime Slaker Rebuild $13,950
- Gratiot Pump Station Repairs $27,700

CLEAN WATER is vital to life