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2005 Annual Drinking Water Quality Report

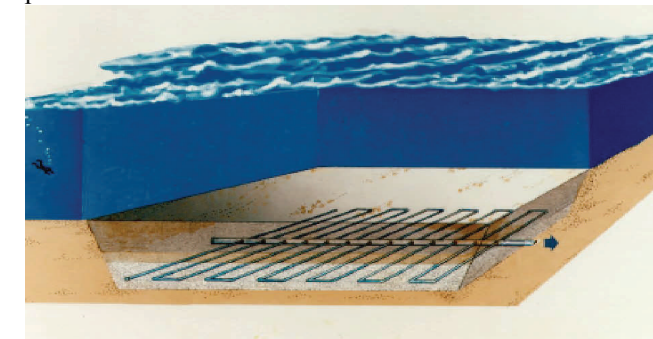


Grand Haven Charter Township

Grand Haven Charter Township is pleased to present this year's Drinking Water Quality Report. This report is designed to inform you about the quality of the water we deliver to you everyday.

Our constant goal is to provide you with a safe and dependable supply of drinking water. We are committed to ensuring the quality of your drinking water.

Our water source is Lake Michigan. Water is collected through submerged intakes located several feet under the lake bottom and is pre-filtered as it enters the treatment facility. The natural sand above the intakes provides the pre-filter barrier which compliments the plants direct filtration process.



We are pleased to report that your drinking water is safe and meets the Federal and State of Michigan drinking water health standards. The Northwest Ottawa Water System (NOWS) treatment plant and Grand Haven Charter Township routinely monitor for a variety of dissolved mineral and organic substances in your drinking water pursuant to state and federal laws.

This report is designed to give you detailed information which will ensure you of the quality of your drinking water. The tables in this brochure show the results of this monitoring from January 1st through December 31st, 2005.

If you have any questions about this report or your drinking

water, please contact Public Services Director Mark VerBerkmoes at 842-5988 ext. 313 or mverberkmoes@ght.org

Moreover, to provide you with an opportunity for public participation in decisions — some of which might affect drinking water quality — the public is invited to attend the bi-monthly NOWS Administrative Committee meetings held at the Grand Haven City Hall. You may call Grand Haven Township for an up-to-date meeting schedule.

All drinking water – including bottled water – may be reasonably expected to contain at least a small amount of some contaminants. It's important to remember that the presence of these substances does not necessarily indicate that the 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 at:

1-800-426-4791

Some people may be more vulnerable to contaminants in

We boast about our pre-filtered Lake Michigan water and consider it the best source in West Michigan.

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 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 cryptosporidium and other microbial contaminants are also

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available from the Safe Drinking Water Hotline.

The sources of drinking water (both tap and bottled water) include rivers, streams, lakes, 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:

- 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 stormwater runoff, industrial or domestic discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, 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, urban stormwater 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, EPA prescribes regulations which 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 must provide the same protection for public health.

Grand Haven Charter Township has a DVD explaining the

production of drinking water from the NOWS plant. If you would like to borrow a copy of the DVD or have staff offer a seminar for your group or class either at the township offices or another location, please contact Kristi Walsh at 842-5988 ext. 425.

DO YOU KNOW WHAT A PENNY WILL BUY?

One penny will deliver about six gallons of drinking water to your home and family every day of the year. Now that's value!



IS THERE A CROSS CONNECTION HERE?

Cross connections are the links through which it is possible for contaminants to enter the drinking water system when the pressure of the polluted source exceeds the pressure of drinking water source. To prevent this, be aware of potential hazards such as hoses in standing water or connections of pipe to private wells.

DEFINITIONS

Parts per million (ppm) - a measurement of concentration. One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - a measurement of concentration. One part per billion corresponds to one minute in 2000 years or a single penny in \$10,000,000.

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

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

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

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

NTU - Nephelometric Turbidity Unit. Turbidity level shall not exceed 0.5 NTU in 95% of the samples every month. This is the measurement of suspended material that is found in water. This is monitored because it's a good indicator of the effectiveness of the filtration system.

Maximum Residual Disinfectant Level or Goal - Means the highest level of a disinfectant allowed in drinking water, MDRL. Means the level of drinking water disinfectant below which there is no known or expected risk to health, MDRLG.

Alpha emitters, Radium 226 & 228 - Radionuclide contaminants that give off ionizing radiation. The state allows NOW to monitor for certain contaminants less than once per year because the concentrations are not expected to vary from year to year.

pCi/l - pico curies per liter (a measure of radioactivity).

Listed below are contaminants/substances detected in the Northwest Ottawa Water System

Not listed are the hundreds of other contaminants for which we tested and that were not detected

REGULATED MONITORING AT THE CUSTOMER TAP							
Substance	Violation Yes/No	Highest Level Detected	Unit Measurement	Range of Detection	MCL	MCLG	Likely Source of Contamination
Lead	No	6	ppb	1 — 16	AL=15	0	Corrosion of household plumbing systems Copper and Lead testing is performed once every three years and highest level detected = 90th percentile
Copper (from 2001)	No	46	ppb	9 — 96	AL=1,300	1,300	
REGULATED AND UNREGULATED MONITORING AT THE TREATMENT PLANT AND DISTRIBUTION SYSTEM							
Total Coliform Bacteria	No	0% System Wide	presence or absence	Coliform was never detected	bacteria in 5% of monthly samples		Naturally present
Turbidity	No	0.17	NTU	0.04 — 0.17	5.0 TT		Soil runoff (Turbidity is a measure of the cloudiness of the water.)
Fluoride	No	1.1	ppm	1 sample/ year	4	4	Water additive that promotes strong teeth
Nitrate	No	Not detected	ppm	1 sample/ year	10	10	Runoff from fertilizer and septic tanks
Alpha emitters (2002)	No	<0.7	pCi/L	1 sample/ 9 years	15	0	Erosion of natural deposits
Arsenic (2005)	No	Not detected	ppb	1 sample/ year	10	0	
Barium (2001)	No	20	ppb	1 sample/ 9 years	2000	2000	
Selenium (2001)	No	1	ppb	1 sample/ 9 years	50	50	
Radium 226 & 228 (2002)	No	<0.9	pCi/L	1 sample/ 9 years	5	0	
Sodium	No	7	ppm	1 sample/ year			Mineral and nutrient erosion
Chlorine Residuals	No	1.44 avg.	ppm	1.30 — 1.82	MRDL= 4.0	MRDLG = 4.0	Water additive to control microbes
Chloride	No	8	ppm	1 sample/year			Mineral and nutrient erosion
List 1 USMA-Assessment*	No	Not detected	ppm	48 samples			Agricultural, urban and industrial storm water runoff
REGULATED MONITORING IN THE DISTRIBUTION SYSTEM							
Total Trihalomethanes	No	30.4 avg.	ppb	5.9 — 51.0	80 avg.	0	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	27.5 avg.	ppb	5.5 — 50.1	60 avg.	0	

*List 1 UCMR Contaminants: 2,4- & 2,6-dinitrotoluene, DCPA mono & di-acid degradate, Acetechlor, 4,4'DDE, EPTC, Molinate, MTBE, Perchlorate, Nitrobenzene, & Terbacil Monitored in February, May, August and November of 2002



Important Health Concerns

- “Unregulated Monitoring” refers to those contaminants for which the EPA has not established drinking water standards. Unregulated monitoring helps the EPA to determine where these contaminants occur and whether regulations are needed.
- Herbicides and pesticides were **not** detected in our drinking water.
- Radon gas is a naturally occurring gas present in some ground water. Radon released from drinking water is a relatively small part of the total radon in air. Other sources of radon are soils, which enter homes through foundations, and radon inhaled while smoking.

Experts are not sure what the cancer risk is from a given level of radon in your drinking water. However, radon gas may pose a lung cancer risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes or clothes, and a stomach cancer risk with drinking water containing radon. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, contact the Ottawa County Department of Environmental Health at (616) 393-5645.

