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 from 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 plant’s 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, 2003.

If you have any questions about this report or other matters related to your drinking water, please contact Public Services Director Mark VerBerkmoes at: 842-5988.

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 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 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:
**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)**
- **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** - Nephlometric 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.
- **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**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Violation Yes/No</th>
<th>Highest Level Detected</th>
<th>Unit Measurement</th>
<th>Range of Detection</th>
<th>MCL</th>
<th>MCLG</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (from 2001)</td>
<td>No</td>
<td>9</td>
<td>ppb</td>
<td>1 — 33</td>
<td>AL=15</td>
<td>0</td>
<td>Corrosion of household plumbing systems</td>
</tr>
<tr>
<td>Copper (from 2001)</td>
<td>No</td>
<td>147</td>
<td>ppb</td>
<td>4 — 355</td>
<td>AL=1,300</td>
<td>1,300</td>
<td>Copper and Lead testing is performed once every three years and highest level detected = 90th percentile</td>
</tr>
</tbody>
</table>

**REGULATED MONITORING AT THE TREATMENT PLANT AND DISTRIBUTION SYSTEM**

**Total Coliform Bacteria**

- Violation: No
- System Wide: 0%
- Presence or Absence: Coliform was not detected
- Bacteria in 5% of monthly samples: Naturally present

**Turbidity**

- Violation: No
- Unit: NTU
- Range: 0.04 — 0.09
- MCL: 5.0
- Likely Source of Contamination: Soil runoff (Turbidity is a measure of the cloudiness of the water.)

**Fluoride**

- Violation: No
- Unit: ppm
- Range: 1.0
- MCL: 4
- Likely Source of Contamination: Water additive that promotes strong teeth

**Nitrate**

- Violation: No
- Unit: ppm
- Range: 0.7
- MCL: 10
- Likely Source of Contamination: Runoff from fertilizer and septic tanks

**ARSENIC (2001)**

- Violation: No
- Unit: ppb
- Range: 1.0
- MCL: 10
- Likely Source of Contamination: Naturally present

**BARIUM (2001)**

- Violation: No
- Unit: ppm
- Range: 20.0
- MCL: 200
- Likely Source of Contamination: Naturally present

**SELENIUM (2001)**

- Violation: No
- Unit: ppb
- Range: 1.0
- MCL: 50
- Likely Source of Contamination: Naturally present

**Radium 226 & 228 (2002)**

- Violation: No
- Unit: pCi/L
- Range: <0.9
- MCL: 5
- Likely Source of Contamination: Erosion of natural deposits

**REGULATED MONITORING IN THE DISTRIBUTION SYSTEM**

**Total Trihalomethanes**

- Violation: No
- Unit: ppb
- Range: 31.2 avg.
- MCL: 80 avg.
- Likely Source of Contamination: By-product of drinking water chlorination

** Haloacetic Acids (HAA5)**

- Violation: No
- Unit: ppb
- Range: 41.2 avg.
- MCL: 60 avg.
- Likely Source of Contamination: By-product of drinking water chlorination

**UNREGULATED MONITORING**

**Sodium**

- Violation: No
- Unit: ppm
- Range: 9
- MCL: 20
- Likely Source of Contamination: Mineral and nutrient

**Radon (1999 test)**

- Violation: No
- Unit: pCi/L
- Range: <49.7
- MCL: 300
- Likely Source of Contamination: Erosion of natural deposits

**Chlorodibromomethane**

- Violation: No
- Unit: ppb
- Range: 7.1
- MCL: 12
- Likely Source of Contamination: By-product of drinking water chlorination

**Chloroform**

- Violation: No
- Unit: ppb
- Range: 35
- MCL: 2.4 — 12
- Likely Source of Contamination: By-product of drinking water chlorination

**Dichlororobromomethane**

- Violation: No
- Unit: ppb
- Range: 12
- MCL: 300
- Likely Source of Contamination: Erosion of natural deposits

**Bromoform**

- Violation: No
- Unit: ppb
- Range: <1.0
- MCL: 0
- Likely Source of Contamination: Erosion of natural deposits

**Sulfate (1 sample/year)**

- Violation: No
- Unit: ppm
- Range: 28
- MCL: 400
- Likely Source of Contamination: Mineral and nutrient

**List 1 USMA-Assessment**

- Violation: No
- Unit: ppm
- Range: Not detected
- MCL: 4
- Likely Source of Contamination: Agricultural, urban storm water runoff

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**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.