We are pleased to report that during the past year, the water delivered to your home or business complied with, or did better than, all the federal and state drinking water requirements. Each year we analyze over 50,000 water samples for bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes, and synthetic inorganic contaminants. For your information, we have included a table below showing what substances were detected in our drinking water. Although all of the substances listed below are under the Maximum Contaminant Level (MCL) set by U.S. EPA, we feel it is important that you know exactly what was detected and how much of the substance was present in the water. None of the other substances regulated by EPA were detected in our water.

### Regulated Substances

<table>
<thead>
<tr>
<th>SUBSTANCE (UNITS)</th>
<th>YEAR SAMPLED</th>
<th>DATE SAMPLED</th>
<th>MCL</th>
<th>MCLG</th>
<th>AMOUNT DETECTED</th>
<th>RANGE LOW-HIGH</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium (ppm)</td>
<td>2002</td>
<td>7/29/02</td>
<td>2</td>
<td>2</td>
<td>0.01</td>
<td>NA</td>
<td>No</td>
<td>Discharge of drilling wastes;</td>
</tr>
<tr>
<td>Fluoride (ppm)</td>
<td>2002</td>
<td>7/26/02</td>
<td>4</td>
<td>4</td>
<td>1.0</td>
<td>NA</td>
<td>No</td>
<td>Discharge of drilling wastes;</td>
</tr>
<tr>
<td>TTHMs (ppb)</td>
<td>2002</td>
<td>4/quarter</td>
<td>80</td>
<td>0</td>
<td>30.6</td>
<td>9.8-82.7</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>2002</td>
<td>daily</td>
<td>NA</td>
<td>0.26</td>
<td>.04-0.26</td>
<td>No</td>
<td>No</td>
<td>Soil runoff.</td>
</tr>
<tr>
<td>Chlorine (ppb)</td>
<td>2002</td>
<td>7/29/02</td>
<td>15</td>
<td>0</td>
<td>2.74</td>
<td>NA</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Total Organic Carbon</td>
<td>2002</td>
<td>1/month</td>
<td>Greater than 1.0</td>
<td>1.88</td>
<td>NA</td>
<td>1.33-2.91 No</td>
<td>Naturally present in the environment.</td>
<td></td>
</tr>
</tbody>
</table>

### Unregulated Substances

<table>
<thead>
<tr>
<th>SUBSTANCE (UNITS)</th>
<th>YEAR SAMPLED</th>
<th>DATE SAMPLED</th>
<th>MCL</th>
<th>MCLG</th>
<th>AMOUNT DETECTED</th>
<th>LOW-HIGH</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium (ppm)</td>
<td>2002</td>
<td>7/26/02</td>
<td>NA</td>
<td>5</td>
<td>NA</td>
<td>NA</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Sulfate (ppm)</td>
<td>2002</td>
<td>7/26/02</td>
<td>NA</td>
<td>32</td>
<td>NA</td>
<td>NA</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Haloacetic acid (ppb)</td>
<td>2002</td>
<td>4/quarter</td>
<td>NA</td>
<td>24</td>
<td>2.0-0.97</td>
<td>No</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>Chloriform (ppb)</td>
<td>2002</td>
<td>4/quarter</td>
<td>NA</td>
<td>26</td>
<td>7.7-75.0</td>
<td>No</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>Dichlorobromomethane (ppb)</td>
<td>2002</td>
<td>4/quarter</td>
<td>NA</td>
<td>5.8</td>
<td>1.6-7.0</td>
<td>No</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>Chlorodibromomethane (ppb)</td>
<td>2002</td>
<td>4/quarter</td>
<td>NA</td>
<td>0.6</td>
<td>Trace-1.0</td>
<td>No</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
</tbody>
</table>

### Distribution System Substances

DISTRIBUTION SYSTEM SUBSTANCES: Lead and copper samples were collected from taps at 30 high-risk homes. These levels found are not found in the City’s water and demonstrate levels found in the plumbing of the household.

### Drinking Water Improvement Projects

In order to provide exceptional service to our customers, we must maintain our existing facilities, and upgrade them when necessary, which we consider a continually ongoing process.

The existing water intake line and shore-well have been in service since 1905. As with all facilities, maintenance keeps them working in top form and extends their useful life. The intake crib and line originally built in 1905, were rebuilt in 1965 and again in 1995. An additional part of maintenance on the lake water intake line was the addition of the 36” shore well valve during the month of October 2002. The original valve was showing signs of wear and plans were made to mount the new valve onto the old valve. With the replacement valve weighing 1800 pounds the task required caution. Earth Tech crews worked through the day to install the new 30” valve. By 3 p.m., the well was filled with water, using the valve, and the Water Production Plant was back in full production.

### What’s In My Water?

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 material, and can pick up substances resulting from the presence of animals or from human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of certain contaminants. An additional part of maintenance on the lake water intake line was the addition of the 36” shore well valve during the month of October 2002. The original valve was showing signs of wear and plans were made to mount the new valve onto the old valve. With the replacement valve weighing 1800 pounds the task required caution. Earth Tech crews worked through the day to install the new 30” valve. By 3 p.m., the well was filled with water, using the valve, and the Water Production Plant was back in full production.

### Substances Expected to be in Drinking Water

To determine and mining activities. The highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLG’s as feasible using the best available treatment technology. NMLG’s — Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

### Drinking Water and People with Weakened Immune Systems

Some people may be more vulnerable to contaminants in drinking water that 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 systems 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 and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791)

### Regulation of the margin of safety.

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 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.

### Total Organic Carbon (TOC)

The total organic carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The ratio shown are the average of the ratios and the range of monthly ratios for the 12 months covered by this report. The TOC removal was measured each month and the system met all TOC removal requirements set by the state.

### Drinking Water Improvements

In order to provide exceptional service to our customers, we must maintain our existing facilities, and upgrade them when necessary, which we consider a continually ongoing process.

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### Increased Security

One change that was very noticeable, was a constantly closed gate. Many security changes have taken place in the nation in the last year. The Michigan Department of Public Health has required all water plants to maintain a locked facility. Entry now is by a coded key pad or by pressing an entry using a call button. Security has been increased all over the City of Alpena Water System and most of the changes are not noticeable.

### TABLE DEFINITIONS

MCL - Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLG’s 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. MCLG’s allow for a margin of safety.

ppm-Parts per million: One part per million (or milligrams per liter) is equivalent to one penny in $10,000.

ppb-Parts per billion: One part per billion (or micrograms per liter) is equivalent to one penny in $1,000,000,000.

NTU - Nephelometric Turbidity Units: Measurement of the clarity, or turbidity, of water.

TTHMs - Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

### Table of Substances Expected to be in Drinking Water

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<thead>
<tr>
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<th>SAMPLED DATE</th>
<th>AMOUNT DETECTED</th>
<th>RANGE LOW-HIGH</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (ppb)</td>
<td>July-August</td>
<td>2002</td>
<td>0.258</td>
<td>0</td>
<td>No</td>
<td>Corrosion of household plumbing.</td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>2002</td>
<td>July-August</td>
<td>1.3</td>
<td>1.3</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>2002</td>
<td>July-August</td>
<td>1.3</td>
<td>0</td>
<td>2</td>
<td>No</td>
</tr>
</tbody>
</table>

### Distribution System Substances

DISTRIBUTION SYSTEM SUBSTANCES: Lead and copper samples were collected from taps at 30 high-risk homes. These levels found are not found in the City’s water and demonstrate levels found in the plumbing of the household.

### Drinking Water Improvement Projects

In order to provide exceptional service to our customers, we must maintain our existing facilities, and upgrade them when necessary, which we consider a continually ongoing process.

### WEB CAMERA VIEW

Web camera view of Thunder Bay and the latest temperature, wind speed and direction can be found at www.glerl.noaa.gov/metdata/apn/
Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save you money by reducing your water and sewer bills. Here are a few suggestions:

Conservation measures you can use inside your home include:

- Fix leaking faucets, pipes, toilets, etc.
- Install water-saving devices in faucets, toilets, and appliances.
- Replace old fixtures (could reduce water consumption by nearly one-half!).
- Wash only full loads of laundry.
- Do not use the toilet for a trash disposal.
- Take shorter showers.
- Do not let the water run while shaving, washing, brushing teeth, or cleaning fruits and vegetables.
- Soak dishes before washing.
- Run the dishwasher only when full.
- Water the lawn and garden in the early morning or evening.

How is my water treated and purified?

The treatment process consists of a series of steps. First, raw water is drawn from Thunder Bay (Lake Huron) and pumped directly to a mixing tank where chlorine, alum and polymer are added. The addition of these chemicals causes small particles to adhere to one another making them heavy enough to settle in a basin from which sediment is removed. After settling, filter aid is added, if necessary, for turbidity removal (turbidity is a common measure of the clarity of water). Also added at this point are fluoride (helps prevent tooth decay) and phosphate (helps prevent corrosion in water system). The water is then filtered through layers of fine carbon and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges. Chlorine is added again at this point as a precaution against any bacteria that may still be present. We carefully monitor your copy (356-0757).

Where does our water come from?

Our fresh water source is surface water from Thunder Bay (Lake Huron). This source has been utilized in Alpena since 1905, and sample data shows that it is of high quality. Over the last 25 years, state and federal environmental regulations have become progressively more stringent resulting in significant improvements in Great Lakes water quality. Efforts to protect our fresh water source include a formal “Source Water Assessment” conducted by the Michigan Department of Environmental Quality. The assessment identifies sources of pollution that may have a negative impact on the quality of our source water. The assessment is in the preliminary stage and copies are available upon request. Customer comments are welcome. Contact your water production plant for information of how to receive your copy (356-0757).

Working Hard for You!

Under the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (USEPA) is responsible for setting national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove these substances. Similarly, the United States Food and Drug Administration (USFDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Each system continually monitors for these substances and reports directly to their state regulatory agency, which in turn reports to the EPA, if any are detected in the drinking water. EPA uses this data to ensure that consumers are receiving clean water and verify that states are enforcing the laws that regulate drinking water. Our Water Quality Report conforms to the federal regulation under the SDWA requiring water utilities to provide detailed water quality information to each of their customers annually. We are committed to providing you with this information about your water supply, because customers who are well informed are our best allies in supporting improvements necessary to maintain our ability to provide the highest quality drinking water.

Customers are invited to contact our utility at any time with questions or concerns. Individual and group tours of our Water Treatment Plant can be arranged by calling (989) 356-0757. Also, please join us at our annual Open House on National Drinking Water Week in early May.

Our water utility customers should consider themselves to be investor-owners of the system. The utility is managed as an enterprise fund and all operation, maintenance, and replacement expenditures are financed entirely by user fees. Consequently, all customer inquiries, requests, or suggestions are welcome and encouraged by the utility. The Alpena Municipal Council is responsible for overseeing the Alpena Water Utility. The City Council meets on the first and third Monday of every month. Utility correspondence may be directed to the following personnel:

Jerry Plume, Earth Tech Plant Manager
phone: 356-0757 email: jerry.plume@earthtech.com

Mike Glowinski, Earth Tech Utility Manager
phone: 354-4891 email: mglowinski@earthtech.com

Rich Sullenger, City Engineer
phone: 354-4158 email: richs@alpena.mi.us

Questions

Call U.S. EPA’s Safe Drinking Water Hotline at 1-800-426-4791.