ganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes, and synthetic inorganic contaminants. For your information, we have compiled a list in the 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>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>2001</td>
<td>2</td>
<td>2</td>
<td>0.01</td>
<td>NA</td>
<td>No</td>
<td>Discharge of drilling wastes; Erosion of natural deposits.</td>
</tr>
<tr>
<td>Selenium (ppm)</td>
<td>2001</td>
<td>0.05</td>
<td>0.05</td>
<td>0.001</td>
<td>NA</td>
<td>No</td>
<td>Discharge of drilling wastes; Erosion of natural deposits.</td>
</tr>
<tr>
<td>Fluoride (ppm)</td>
<td>2001</td>
<td>4</td>
<td>4</td>
<td>1.1</td>
<td>NA</td>
<td>No</td>
<td>Erosion of natural deposits, Water additive which promotes strong teeth, discharge from fertilizer &amp; aluminum factories, By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>TTHMs (ppb)</td>
<td>2001</td>
<td>80</td>
<td>0</td>
<td>31.4</td>
<td>20.1-48.2</td>
<td>No</td>
<td>Soil runoff.</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>2001</td>
<td>TT</td>
<td>NA</td>
<td>0.14</td>
<td>0.04-0.14</td>
<td>No</td>
<td>Soil runoff.</td>
</tr>
<tr>
<td>Alpha Emitters (pCi/l)</td>
<td>1998</td>
<td>15</td>
<td>0</td>
<td>1.0</td>
<td>NA</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
</tbody>
</table>

### UNREGULATED SUBSTANCES

<table>
<thead>
<tr>
<th>SUBSTANCE (UNITS)</th>
<th>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>Copper (ppm)</td>
<td>1999</td>
<td>1.3</td>
<td>1.3</td>
<td>0.287</td>
<td>0</td>
<td>No</td>
<td>Corrosion of house- holding plumbing.</td>
</tr>
<tr>
<td>Lead (ppb)</td>
<td>1999</td>
<td>15</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>No</td>
<td>Corrosion of house- holding plumbing.</td>
</tr>
</tbody>
</table>

### DISTRIBUTION SYSTEM SUBSTANCES

<table>
<thead>
<tr>
<th>SUBSTANCE (UNITS)</th>
<th>SAMPLED</th>
<th>ACTION LEVEL</th>
<th>MCL</th>
<th>MCLG</th>
<th>AMOUNT DETECTED</th>
<th>SITES ABOVE AL</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium (ppm)</td>
<td>2001</td>
<td>7</td>
<td>NA</td>
<td>NA</td>
<td>7</td>
<td>NA</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Sulfate (ppm)</td>
<td>2001</td>
<td>34</td>
<td>NA</td>
<td>NA</td>
<td>0.014</td>
<td>0.003-0.014</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>Chloriform (ppb)</td>
<td>2001</td>
<td>25</td>
<td>NA</td>
<td>NA</td>
<td>15.5-40.1</td>
<td>No</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>Bromochloro-</td>
<td>2001</td>
<td>5.4</td>
<td>NA</td>
<td>NA</td>
<td>9.6-9.9</td>
<td>No</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
<tr>
<td>Bromodichloro-</td>
<td>2001</td>
<td>0.9</td>
<td>NA</td>
<td>NA</td>
<td>0.7-1.2</td>
<td>No</td>
<td>No</td>
<td>By-product of drinking water chlorination.</td>
</tr>
</tbody>
</table>

### Substances Expected to be in Drinking 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 some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S.EPA’s Safe Drinking Water Hotline (1-800-426-4791).

**Substances 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;
- **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- **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;
- **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.

### 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.

One of the more significant projects completed during the year:

A computer data gathering system was installed on the nine filter discharge and clear well influent in the plant. This unit is one of two sending collected information to the monitoring computer, thereby the information gains accuracy.

### Computer screen continually displays information about all nine points which in turn monitor finished water quality. From this screen all other program screens are available.

### Data gathering processor is located in the lowest point in the plant. This unit is one of two sending collected information to the monitoring computer.

### Turbidity measuring unit. Unit is located in the lowest point in the plant and by having the unit down low water flow is increased thereby the information gains accuracy.

### What it takes to be a water plant operator.

Operating a water plant requires a variety of talents from electronics to hands on mechanical skills to computer skills and water lab skills. All of these are required to operate one eight hour shift. To maintain this level of talent and maintain a water license in the State of Michigan, continuing education credits must be obtained. Each operator will attend a mixture of classes throughout the year.

I hope you enjoyed reading this water quality report, enjoy the summer.
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 comment on the information found in the assessment is welcome. Contact your water production plant for information on how to receive your copy (356-0757).

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 into 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 the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste). The water is then pumped to sanitized reservoirs and water towers, and into your home or business.

ANNUAL WATER QUALITY REPORT

ALPENA WATER TREATMENT PLANT

1300 STATE AVE.

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

Jerry Plume, Plant Manager — jerry_plume@earthtech.com

Rich Sullenger, City Engineer — rich@alpena.mi.us

Mike Glowinski, Utility Manager — alb@alpena.mi.us

Mike Glowinski, Utility Manager — mglowinski@earthtech.com

Jerry Plume, Plant Manager — jerry_plume@earthtech.com

Jerry Plume (Water Plant Superintendent)

Glen & India Run: Favorite drinks, Alpena’s Water?

ANNUAL WATER QUALITY REPORT

ALPENA, MICH. 49707

Water Conservation Tips

Water conservation measures are important first step in protecting our water supply. Such measures not only save you money by reducing your water, but can also 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 let the water run while shaving, washing, brushing teeth, or cleaning fruits and vegetables.
- Soak dishes before washing.
- Take shorter showers.
- Run the dishwasher only when full.
- Water the lawn and garden in the early morning or evening.
- Do not let the water run while shaving, washing, brushing teeth, or cleaning fruits and vegetables.
- Soak dishes before washing.
- Take shorter showers.
- Run the dishwasher only when full.
- Water the lawn and garden in the early morning or evening.

Working Hard for You!

Under the Safe Drinking Water Act (SDWA), the United States Environmental Agency (EPA) 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 (FDA) 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.

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:

- Mike Glowinski, Utility Manager
- Jerry Plume, Plant Manager
- Rich Sullenger, City Engineer
- Mike Glowinski, Utility Manager
- Alan L. Bakalarski, City Manager

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 Hours during National Drinking Water Week in early May.

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QUESTIONS

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