Drinking Water Improvement Projects

In order to provide exceptional service to our customers, we continuously strive to maintain our existing facilities. Equipment upgrade needs are routinely evaluated and budgeted as required. Examples of these projects appear in the pictures that follow:

During the water treatment process, alum is added to the water to gather up any microscopic particles. This makes them large enough to settle to the bottom of our pretreatment basins. Every six months these basins are cleaned sending a large volume of solids to the Water Recycling Plant. This large volume would have a huge impact on their plant. In response, a sludge collection system has been installed on all three pretreatment basins. The solids are discharged every day in small amounts to lessen the impact on the Water Recycling Plant.

Drinking Water Quality

We are pleased to report that during the past year, the water delivered to your home or business complied with, or was better than, all state and federal 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 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 were regulated by EPA were detected in our water.

REGULATED SUBSTANCES: The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one-year old.

<table>
<thead>
<tr>
<th>SUBSTANCE (UNITS)</th>
<th>YEAR</th>
<th>DATE SAMPLED</th>
<th>MCL</th>
<th>MCLG</th>
<th>DETECTED</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium (ppm)</td>
<td>2008</td>
<td>6/17/08</td>
<td>2</td>
<td>2</td>
<td>0.01</td>
<td>NA</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Fluoride (ppm)</td>
<td>2008</td>
<td>6/17/08</td>
<td>4</td>
<td>4</td>
<td>0.95</td>
<td>NA</td>
<td>Erosion of natural deposits, Water additive which promotes strong teeth</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>2008</td>
<td>daily</td>
<td>TT</td>
<td>NA</td>
<td>0.06</td>
<td>0.04-0.19</td>
<td>Soil runoff.</td>
</tr>
<tr>
<td>Alpha Emitters (pCi/l)</td>
<td>2002</td>
<td>7/29/02</td>
<td>15</td>
<td>0</td>
<td>2.74</td>
<td>NA</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Total Organic Carbon</td>
<td>2008</td>
<td>1/month</td>
<td>&lt;1</td>
<td>&gt;1</td>
<td>1.99</td>
<td>1.15-3.09</td>
<td>Present in the environment</td>
</tr>
</tbody>
</table>

UNREGULATED SUBSTANCES: Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate these contaminants.

<table>
<thead>
<tr>
<th>SUBSTANCE (UNITS)</th>
<th>YEAR</th>
<th>DATE SAMPLED</th>
<th>MCL</th>
<th>MCLG</th>
<th>DETECTED</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (ppm)</td>
<td>2008</td>
<td>July-August</td>
<td>1.3</td>
<td>1.3</td>
<td>0 - 1.49</td>
<td>1</td>
<td>Corrosion of house-hold plumbing</td>
</tr>
<tr>
<td>Lead (ppm)</td>
<td>2008</td>
<td>July-August</td>
<td>15</td>
<td>0</td>
<td>0 - 3.0</td>
<td>0</td>
<td>Corrosion of house-hold plumbing</td>
</tr>
<tr>
<td>TTHMs (ppb)</td>
<td>2008</td>
<td>1/quarter</td>
<td>80</td>
<td>0</td>
<td>27.7</td>
<td>13.0-59.0</td>
<td>Disinfection Byproduct</td>
</tr>
<tr>
<td>HAOC (ppb)</td>
<td>2008</td>
<td>1/quarter</td>
<td>60</td>
<td>0</td>
<td>26.2</td>
<td>3.0-80.0</td>
<td>Disinfection Byproduct</td>
</tr>
<tr>
<td>Free Chlorine</td>
<td>2008</td>
<td>Daily</td>
<td>4.0</td>
<td>0.75</td>
<td>0.00-1.25</td>
<td>0</td>
<td>Control microbes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL ORGANIC CARBON</th>
<th>YEAR</th>
<th>MONTHS</th>
<th>ACTION LEVEL</th>
<th>AMOUNT DETECTED</th>
<th>SITES ABOVE AL</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>1/month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Present in the environment</td>
</tr>
</tbody>
</table>

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Alpena is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Drinking Water Contamination

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 substances that are released from the land, such as salts and metals, which can be naturally-occurring or result from human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of certain 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).

- 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, and FCC coke gas production;
- 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 result from gas production and mining activities.

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I hope you enjoyed reading this latest water quality report, enjoy the summer. J. Plume
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 usage, but can also save your 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.
- Soak dishes before washing.
- Water your 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. Raw water is drawn from Thunder Bay (Lake Huron) and pumped to a mixing tank where chlorine, alum and polymer are added. The addition of these chemicals causes small particles to adhere to one another until they are 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 (which helps prevent tooth decay) and phosphate (which helps prevent corrosion in water systems). The water is then filtered through layers of fine carbon and sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges. Chlorine is added again at this point as a final disinfectant. 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 through the distribution piping to sanitized reservoirs and water towers, and into your home or business.

Annual Water Quality Report

Alpena’s water meets, or is better than, state and federal standards. Our water utility customers should consider themselves to be investor-owners of the system. The utility is managed as an enterprise fund and all operations, 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, United Water Plant Manager
phone: 356-0757 email - jerry.plume@unitedwater.com

Mike Glowinski, United Water Utility Manager
phone: 354-4891 email - michael.glowinski@unitedwater.com

Thad Taylor, City Manager
phone: 354-4158 email - thad@alpena.mi.us

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

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 progressively become more stringent resulting in significant improvements in Great Lakes water quality. Efforts to protect our fresh water source include a “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. Copies of the assessment are available upon request. Contact your water production plant for information of how to receive your copy (356-0757). A Source Water Protection Plan is presently being developed and will be phased in over the next fifteen years.