Surface water is the sole source of water for those served by the Town of Friday Harbor. Trout Lake, the primary source, is about five and a half miles west of Town in an isolated, undeveloped pocket fed by a steep drainage basin. The Town owns 600 acres of the surrounding 840 acre watershed.

### Distribution System: detected levels of Primary Standards

*(see acronyms and definitions on page 2)*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MCL</th>
<th>MCLG</th>
<th>Maximum Reported Value</th>
<th>Range</th>
<th>Likely Source</th>
<th>Meets Regs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (1)</td>
<td>Action Level: 90% of the homes tested must have copper levels less than .13 ppm</td>
<td>1.3 ppm</td>
<td>.66 ppm</td>
<td>.038 to .66 ppm</td>
<td>Corrosion of household plumbing systems</td>
<td>Yes</td>
</tr>
<tr>
<td>Lead (1)</td>
<td>Action Level: 90% of the homes tested must have lead levels less than .015 ppm</td>
<td>0 ppm</td>
<td>.003 ppm</td>
<td>Not detected to .003 ppm</td>
<td>Corrosion of household plumbing systems</td>
<td>Yes</td>
</tr>
<tr>
<td>Total Trihalomethanes (THMs)</td>
<td>80 ppb</td>
<td>0 ppb</td>
<td>43.65 average for 2012(2)</td>
<td>15.2 to 63.1 ppb</td>
<td>By-products of chlorination process</td>
<td>Yes(3)</td>
</tr>
</tbody>
</table>

1) Copper and lead are both naturally-occurring metals. Lead and copper have never been detected in the Town's source water. Both have been used to make household plumbing fixtures for many years, although Congress banned the installation of lead solder, pipes and fittings in 1986. The two contaminants get into drinking water when water reacts with these metals in pipes and fixtures. This is particularly likely to happen when water sits in pipes for more than a few hours. When lead or copper reach the action level in ten percent of the homes sampled, the water provider must begin certain water treatment steps.

The pH range of Friday Harbor water is 7.78 to 7.95 which lessens the corrosive potential of copper and lead. Until July 1998, WA State DOH required a random testing of ten homes once a year for the presence of copper and lead. The detection rates have been so low that these tests are now required every three years. The next testing date is July, 2013.

2) This test is performed once a quarter in the distribution system. Because the test results are averaged over four consecutive quarters, some values in the range may be higher than the maximum reported value.

3) In 2012 the THM yearly average was below the MCL. Some people who drink water containing THMs over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. THM’s are formed when organics in the water come in contact with chlorine. We have lowered chlorine levels and have made treatment changes to enhance removal of organics. If you would like more information about THM’s please call us at 360-378-2154.
In 2012 the Town’s water system produced 119,152,000 gallons with system leakage of 10,995,305 gallons. The Town of Friday Harbor goal is to reduce unaccounted for water to 9% by the end of 2013. Unaccounted-for water at the end of 2012 was 9.23%.

This was accomplished by early leak detection technology and meter replacement. Authorized consumption will be reduced through consumer education and the low flush toilet rebate program. Estimated savings is 1.5 million gallons. We estimate that we saved 2.5 million gallons of water in 2012 with meter replacement and leak detection. The Town of Friday Harbor Waste Water Plant completed an effluent water recovery system in the Spring of 2008. The Waste Water Plant water consumption is down from 3.2 million gallons in 2008 to 542,000 gallons in 2009. We are currently implementing leak detection, meter replacement, a low flush toilet rebate program, consumer education, and replacement of aging mains in the distribution system.

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 Environmental Protection Agency’s Safe Drinking Water Hotline (800-426-4791). Some people may be more vulnerable to drinking water contaminants than the general population. Immuno-compromised persons, such as people 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/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available at www.epa.gov/safewater or from the Safe Drinking Water Hotline (800) 426-4791.

**Acronyms and Definitions**

- **Action Level**
  - The concentration of a contaminant which, if exceeded, triggers a treatment technique or other requirement which a water system must follow.

- **Cryptosporidium**
  - A tiny organism that is associated with the disease cryptosporidiosis. This disease can be transmitted by swallowing the organism in contaminated water or food, person-to-person contact, or other exposure routes.

- **EPA**
  - Environmental Protection Agency. A federal level agency.

- **Fecal Coliform**
  - Fecal coliforms and E.coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes.

- **Giardia**
  - A tiny organism that is associated with the disease giardiasis. Swallowing this organism in contaminated food or water, exposure from person-to-person contact, and other exposure routes may cause this disease.

- **Hardness**
  - Hardness is an indication of the amount of dissolved minerals in water. Friday Harbor water has a range of hardness values from 80-100 ppm, which is considered “medium soft.”

- **Inorganic Chemicals**
  - Examples include things like metals, minerals and salts.

- **MCL**
  - Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close as possible to the MCLGs as feasible using the best treatment technology.

- **MCLG**
  - Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

- **ND**
  - Not Detected.

- **NTU**
  - Nephelometric Turbidity Unit. Unit of measure used to describe water clarity.

- **PAH**
  - Polyaromatic Hydrocarbons. A group of synthetic organic compounds that are tested for.

- **pH**
  - Indicates whether a liquid is acidic or basic. Friday Harbor water has a pH range of 7.0 to 8.3 which lessens the corrosive potential of copper and lead.

- **ppb**
  - parts per billion. One ppb is approximately equal to 1 drop of water in a 22,000 gallon swimming pool.

- **ppm**
  - parts per million. The same as mg/l (milligram per liter). One ppm is approximately equal to 1 drop of water in 22 gallons.

- **Primary Standards**
  - Legally-enforceable standards that apply to public water systems. Primary standards limit the levels of specific contaminants that can adversely affect public health and are known or are anticipated to occur in water.

- **Secondary Standards**
  - Non-enforceable guidelines regarding contaminants that may cause cosmetic effects, such as tooth discoloration, or aesthetic effects, such as taste, color or odor, in drinking water.

- **SRL**
  - State Regulatory Level. Standards that are set by WA State DOH and may supercede federal levels.

- **SOC**
  - Synthetic Organic Chemicals. Examples include such things as weed killers, fertilizers and herbicides.

- **TOC**
  - Total Organic Compounds. Includes things like petroleum-based chemicals, industrial by-products and dry cleaning solvents.

- **VOC**
  - Volatile Organic Chemicals. Examples include things like petroleum-based chemicals, industrial by-products and dry cleaning solvents.

- **WA State DOH**
  - Washington State Department of Health.

**CCR Contact:**
Mike Deegan
Water System Manager
360-378-8353
tfhwater@fridayharbor.org
The following substances were tested for but not detected or below the MCL:

Volatile Organics—State waiver in 2010. These results are from 12/11. Herbicides are tested once every three years. These results are from 06/09.

State waiver for Synthetic Organic testing through 2013. Inorganics are tested yearly. These results are from 12/11.

### Volatile Organics

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3 – Trichloropropane</td>
</tr>
<tr>
<td>Benzene</td>
</tr>
<tr>
<td>Bromobenzene</td>
</tr>
<tr>
<td>Bromochloromethane</td>
</tr>
<tr>
<td>Bromomethane</td>
</tr>
<tr>
<td>Dibromomethane</td>
</tr>
<tr>
<td>Dichlorobenzenes</td>
</tr>
<tr>
<td>Dichlorodifluoromethane</td>
</tr>
<tr>
<td>Dichloroethanes</td>
</tr>
<tr>
<td>Dichloroethylene</td>
</tr>
<tr>
<td>Dichloropropanes;</td>
</tr>
<tr>
<td>Dichloropropenes</td>
</tr>
<tr>
<td>Ethylbenzene</td>
</tr>
<tr>
<td>Hexachlorobutacliene</td>
</tr>
<tr>
<td>Hexachlorocyclo-Pentadiene</td>
</tr>
<tr>
<td>Isopropylbenzene</td>
</tr>
<tr>
<td>Methylene Chloride</td>
</tr>
<tr>
<td>Naphthalene</td>
</tr>
<tr>
<td>n-Butylbenzene</td>
</tr>
<tr>
<td>n-Propylbenzene</td>
</tr>
<tr>
<td>o-Chlorotoluene</td>
</tr>
<tr>
<td>p-Dichlorobenzene</td>
</tr>
<tr>
<td>p-Isopropyltoluene</td>
</tr>
<tr>
<td>Sec - Butylbenzene</td>
</tr>
<tr>
<td>Styrene</td>
</tr>
<tr>
<td>Tert - Butylbenzene</td>
</tr>
<tr>
<td>Tetrachloroethanes</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
</tr>
<tr>
<td>Toluene</td>
</tr>
<tr>
<td>Total Xylenes</td>
</tr>
<tr>
<td>Trichlorobenzenes</td>
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<td>Trichloroethanes</td>
</tr>
<tr>
<td>Trichloroethylene</td>
</tr>
<tr>
<td>Trichlorofluoromethane</td>
</tr>
<tr>
<td>Trimethylbenzenes</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
</tr>
<tr>
<td>Butachlor</td>
</tr>
<tr>
<td>Chlordane</td>
</tr>
<tr>
<td>Cyanazine</td>
</tr>
<tr>
<td>Diazinon</td>
</tr>
<tr>
<td>Di(Ethylhexyl)-Adipate</td>
</tr>
<tr>
<td>Di(Ethylhexyl)-Phthalate</td>
</tr>
<tr>
<td>Dieldrin</td>
</tr>
<tr>
<td>Disulfoton</td>
</tr>
<tr>
<td>Endosulfan l</td>
</tr>
<tr>
<td>Endrine</td>
</tr>
<tr>
<td>EPTC</td>
</tr>
<tr>
<td>Heptachlor</td>
</tr>
<tr>
<td>Fleptachol or Epoxide &quot;B&quot;</td>
</tr>
<tr>
<td>Hexachlorobenzene</td>
</tr>
<tr>
<td>Lindane</td>
</tr>
<tr>
<td>Malathion</td>
</tr>
<tr>
<td>Metholachlor</td>
</tr>
<tr>
<td>Methoxychlor</td>
</tr>
<tr>
<td>Metribuzin</td>
</tr>
<tr>
<td>Naphthalene</td>
</tr>
<tr>
<td>Fluorene</td>
</tr>
<tr>
<td>Acenaphthylene</td>
</tr>
<tr>
<td>Acenaphthene</td>
</tr>
<tr>
<td>Anthracene</td>
</tr>
<tr>
<td>Benz(A)Anthracene</td>
</tr>
<tr>
<td>Benzo(B)Fluoranthene</td>
</tr>
<tr>
<td>Benzo(G,H,I)Perylene</td>
</tr>
<tr>
<td>Benzo(K)Fluoranthene</td>
</tr>
<tr>
<td>Chrysene</td>
</tr>
<tr>
<td>Dibenzo(A,H)anthracene</td>
</tr>
<tr>
<td>Fluoranthene</td>
</tr>
<tr>
<td>Indeno(1,2,3-CD)pyrene</td>
</tr>
<tr>
<td>Phenanthrene</td>
</tr>
<tr>
<td>Pyrene</td>
</tr>
<tr>
<td>Parathion</td>
</tr>
<tr>
<td>PCBs (Total Arochloris)</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
</tr>
<tr>
<td>Benzyl Butyl Phthalate</td>
</tr>
<tr>
<td>Di-N-Butyl Phthalate</td>
</tr>
<tr>
<td>Diethyl Phthalate</td>
</tr>
<tr>
<td>Dimethyl Phthalate</td>
</tr>
<tr>
<td>Prometon</td>
</tr>
<tr>
<td>Propachlor</td>
</tr>
<tr>
<td>Simazine</td>
</tr>
<tr>
<td>Terbacil</td>
</tr>
<tr>
<td>Toxaphene</td>
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<tr>
<td>Trifluralin</td>
</tr>
<tr>
<td>3,5- Dichlorobenzoic Acid</td>
</tr>
<tr>
<td>Actiflorfin</td>
</tr>
<tr>
<td>Bentazon</td>
</tr>
<tr>
<td>Chloramben</td>
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<tr>
<td>Dacthal (DCPA)</td>
</tr>
<tr>
<td>Dicamba</td>
</tr>
<tr>
<td>Dichlorprop</td>
</tr>
<tr>
<td>Dinoseb</td>
</tr>
<tr>
<td>MCFA</td>
</tr>
<tr>
<td>MCPP</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
</tr>
<tr>
<td>Picoloram</td>
</tr>
<tr>
<td>Triclopy</td>
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</table>

### Synthetic Organics

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3 - Dichlorobenzene</td>
</tr>
<tr>
<td>4,4 - DDD</td>
</tr>
<tr>
<td>4,4 - DDE</td>
</tr>
<tr>
<td>4,4 - DDT</td>
</tr>
<tr>
<td>Alachlor</td>
</tr>
<tr>
<td>Aldrin</td>
</tr>
<tr>
<td>Atrazine</td>
</tr>
<tr>
<td>Benzo(A)Pyrene</td>
</tr>
<tr>
<td>Bromacil</td>
</tr>
<tr>
<td>Antimony</td>
</tr>
<tr>
<td>Arsenic—06/09</td>
</tr>
<tr>
<td>Asbestos: testing required in 1999 &amp; every 9 yrs</td>
</tr>
<tr>
<td>Barium</td>
</tr>
<tr>
<td>Beryllium</td>
</tr>
<tr>
<td>Cadmium—06/09</td>
</tr>
<tr>
<td>Chromium</td>
</tr>
<tr>
<td>Color</td>
</tr>
<tr>
<td>Cyanide, Free</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
</tr>
<tr>
<td>Fluoride</td>
</tr>
<tr>
<td>Hardness</td>
</tr>
<tr>
<td>Iron—06/09</td>
</tr>
<tr>
<td>Manganese—06/09</td>
</tr>
<tr>
<td>Mercury</td>
</tr>
<tr>
<td>Nickel</td>
</tr>
<tr>
<td>Nitrate—N—06/09</td>
</tr>
<tr>
<td>Nitrite-N</td>
</tr>
<tr>
<td>Selenium</td>
</tr>
<tr>
<td>Silver</td>
</tr>
<tr>
<td>Sodium</td>
</tr>
<tr>
<td>Sulfate</td>
</tr>
<tr>
<td>Thallium</td>
</tr>
</tbody>
</table>

### Radiological

OK. Testing required in 2009 & once every 3 years thereafter

### Microbiological

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.coli bacteria</td>
</tr>
<tr>
<td>Cryptosporidium</td>
</tr>
<tr>
<td>Giardia</td>
</tr>
</tbody>
</table>

### Inorganics

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
</tr>
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</tr>
<tr>
<td>Barium</td>
</tr>
<tr>
<td>Beryllium</td>
</tr>
<tr>
<td>Cadmium—06/09</td>
</tr>
<tr>
<td>Chromium</td>
</tr>
<tr>
<td>Color</td>
</tr>
<tr>
<td>Cyanide, Free</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
</tr>
<tr>
<td>Fluoride</td>
</tr>
<tr>
<td>Hardness</td>
</tr>
<tr>
<td>Iron—06/09</td>
</tr>
<tr>
<td>Manganese—06/09</td>
</tr>
<tr>
<td>Mercury</td>
</tr>
<tr>
<td>Nickel</td>
</tr>
<tr>
<td>Nitrate—N—06/09</td>
</tr>
<tr>
<td>Nitrite-N</td>
</tr>
<tr>
<td>Selenium</td>
</tr>
<tr>
<td>Silver</td>
</tr>
<tr>
<td>Sodium</td>
</tr>
<tr>
<td>Sulfate</td>
</tr>
<tr>
<td>Thallium</td>
</tr>
</tbody>
</table>

### Herbicides

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4D</td>
</tr>
<tr>
<td>2,4 DB</td>
</tr>
<tr>
<td>2,4,5 - TP (Silvex)</td>
</tr>
<tr>
<td>2,4,5 T</td>
</tr>
</tbody>
</table>
**Trout Lake Treatment Plant: detected levels of Primary Standards**

*(see acronyms and definitions on page 2)*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MCL</th>
<th>MCLG</th>
<th>Maximum Reported Value</th>
<th>Range</th>
<th>Likely Source</th>
<th>Meets Regs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbidity ((^4))</td>
<td>0.5 NTU</td>
<td>Not applicable</td>
<td>.07 NTU</td>
<td>.03 to 0.29 NTU</td>
<td>Erosion of soils</td>
<td>Yes 100% of samples met turbidity limits</td>
</tr>
</tbody>
</table>

\(^4\) Turbidity has no health effects, however, turbidity can interfere with disinfection and provide a medium for microbial growth. Washington State Department of Health requires treatment facilities to provide full filtration and disinfection.

The Town participated in voluntary Unregulated Contaminant Monitoring (UCMR2). Results: N-nitroso-dimethylamine (NDMA) 0.002ug/L (>MRL on 03/09, 06/09, 09/09) and N-nitroso-methylethylamine (NMEA) 0.003 ug/L (>MRL on 09/09). UCMR results are available.

All other levels of Primary Standards were so low in Trout Lake Treatment Plant water that Washington State Department of Health waived reporting through December, 2013. Primary standards limit the levels of specific contaminants that can adversely affect public health and are known or are anticipated to occur in water.