

# Town of Friday Harbor

## 2011 Consumer Confidence Report on Water Quality



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)

Parameter	MCL	MCLG	Maximum Reported Value	Range	Likely Source	Meets Regs?
Copper ( <sup>1</sup> )	Action Level: 90% of the homes tested must have copper levels less than 1.3 ppm	1.3 ppm	.66 ppm 2010 levels, tests required every 3 years	.038 to .66 ppm	Corrosion of household plumbing systems	Yes
Lead ( <sup>1</sup> )	Action Level: 90% of the homes tested must have lead levels less than .015 ppm	0 ppm	.003 ppm 2010 levels, tests required every 3 years	Not detected to .003 ppm	Corrosion of household plumbing systems	Yes
Total Trihalo-methanes (THMs)	80 ppb	0 ppb	86.0 average for 2010( <sup>2</sup> )	62.8 to 119.5 ppb	By-products of chlorination process	No( <sup>3</sup> )

<sup>1</sup>) 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 7.8 to 8.2 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.

<sup>2</sup>) 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.

<sup>3</sup>) In 2010 the THM yearly average was above 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 are currently making treatment changes to enhance removal of organics. If you would like more information about THM's please call us at 360-378-2154.

We're on  
the web!

[www.fridayharbor.org](http://www.fridayharbor.org)

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## 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 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 bug spray.

### Total Coliform

A group of bacteria that can be naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

### Treatment Technique

A required process intended to reduce the level of a contaminant in drinking water. A treatment technique may be required by the EPA or WA State DOH.

### Turbidity

Describes how cloudy the water is. The smaller the number, the clearer the water. Turbidity has no health effects, however, it can interfere with disinfection and provide a medium for microbial growth.

### 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 Wilks**  
**Utilities Superintendent**  
**360-378-2154**  
**mikew@fridayharbor.org**

In 2010 the Town's water system produced 108,255,000 gallons with system leakage of 6,238,828 gallons. The Town of Friday Harbor goal is to reduce unaccounted for water to 9% by the end of 2010. Unaccounted-for water at the end of 2010 was 5.80%. This was accomplished by leak detection 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 3.4 million gallons of water in 2010 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, and consumer education.

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](http://www.epa.gov/safewater) or from the Safe Drinking Water Hotline (800) 426-4791.

## The following substances were tested for but not detected or below the MCL:

**Volatile Organics**—State waiver in 2010. These results are from 06/08. **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 12/10.

### Volatile Organics

1,2,3 – Trichloropropane  
Benzene  
Bromobenzene  
Bromochlorometane  
Bromoneftne  
Carbon Tetrachloride  
Chlorobenzenes  
Chloroethane  
Chloromethane  
Dibromomethane  
Dchlorobenzenes  
Dichlorodifluoromethane  
Dichloroethanes  
Dichloroethylenes  
Dchloropropanes;  
Dichloropropenes  
Ethylbenzene  
Hexachlorobutacliene  
Hexachlorocyclo-Pentadiene  
Isopropylbenzene  
Methylene Chloride  
Naphthalene  
n-Butylbenzene  
n-Propylbenzene  
o-Chloratoluene  
p-Dichlorobenzene  
p-Isopropyltoluene  
Sec - Butylbenzene  
Styrene  
Tert - Butylbenzene  
Tetrachloroethanes  
Tetrachloroethylene  
Toluene  
Total Xylenes  
Trichlorobenzenes  
Trichloroethanes  
Trichloroethylene  
Trichlorofluormethane  
Trimethylbenzenes  
Vinyl Chloride

### Synthetic Organics

1,2,3 - Dichlorobenzene  
4,4 - DDD  
4,4 - DDE  
4,4 - DDT  
Alachlor  
Aldrin  
Atrazine  
Benzo(A)Pyrene  
Bromacil

Butachlor  
Chlordane  
Cyanazine  
Diazinon  
Di(Ethylhexyl)-Adipate  
Di(Ethylhexyl)-Phthalate  
Dieldrin  
Disulfoton  
Endosulfan 1  
Endrine  
EPTC  
Heptachlor  
Fleptachl or Epoxide "B"  
Hexachlorobenzene  
Lindane  
Malathion  
Metholachlor  
Methoxychlor  
Metribuzin  
Naphthalene  
Fluorene  
Acenaphtylene  
Acenaphthene  
Anthracene  
Benz(A)Anthracene  
Benzo(B)Fluorathene  
Benzo(G,H,I)Perylene  
Benzo(K)Fluoranthene  
Chrysene  
Dibenzo(A,H)anthracene  
Fluoranthene  
Indeno(1,2,3-CD)pyrene  
Phenathrene  
Pyrene  
Parathion  
PCBS (Total Arochlors)  
Pentachlorophenol  
Benzyl Butyl Phthalate  
Di-N-Butyl Phthalate  
Diethyl Phthalate  
Dimethyl Phthalate  
Prometon  
Propachlor  
Simazine  
Terbacil  
Toxaphene  
Trifluralin

### Herbicides

2,4D  
2,4 DB  
2,4,5 - TP (Silvex)  
2,4,5 T

3,5- Dichlorobenzoic Acid  
Actiflorfin  
Bentazon  
Chloramben  
Dacthal (DCPA)  
Dicamba  
Dichlorprop  
Dinoseb  
MCPA  
MCPP  
Pentachlorophenol  
Picloram  
Triclopry

### Inorganics

Antimony  
Arsenic—06/09  
Asbestos: testing required  
in 1999 & every 9 yrs  
Barium  
Beryllium  
Cadmium—06/09  
Chloride  
Chromium  
Color  
Cyanide, Free  
Electrical Conductivity  
Fluoride  
Hardness  
Iron—06/09  
Manganese—06/09  
Mercury  
Nickel  
Nitrate-N—06/09  
Nitrite-N  
Selenium  
Silver  
Sodium  
Sulfate  
Thallium

### Radiological

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

### Microbiological

E.coli bacteria  
Cryptosporidium  
Giardia

# Trout Lake Treatment Plant: detected levels of Primary Standards

(see acronyms and definitions on page 2)

Parameter	MCL	MCLG	Maximum Reported Value	Range	Likely Source	Meets Regs?
Turbidity ( <sup>4</sup> )	0.5 NTU	Not applicable	.06 NTU Highest monthly average occurred in May 2010.	.03 to .14 NTU Based on daily samples	Erosion of soils	Yes 100% of samples met turbidity limits

<sup>4</sup>) 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-nitrosodimethylamine (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, 2010. Primary standards limit the levels of specific contaminants that can adversely affect public health and are known or are anticipated to occur in water.

