

# Annual Water Quality Report (Reporting Year: 2008)

## Horsehead Bay (State ID #308782)

**What is this?** We are providing you with your annual water quality report also referred to as a Consumer Confidence Report to provide you with information about the water you drink. This report shows that your water meets or exceeds federal and state primary **drinking water standards**. Water quality information available through **May 2009** has been included to keep you better informed.

**We're here to serve you...** *Our office hours are:*

*Monday – Friday 8:00 am – 4:30 pm*  
*Phone: (253) 857-1511 or 857-5950*



*You can find additional information on our website at: <http://www.penlight.org>*

### **What are drinking water standards?**

Standards are typically numerical limits on the concentrations, or amounts, of a particular contaminant. The Federal Safe Drinking Water Act (SDWA) categorizes drinking water standards into primary and secondary contaminants. Primary standards relate to contaminants that affect public health. Secondary standards relate to contaminants that affect aesthetic qualities, such as appearance, taste, and odor.

Water utilities are responsible for sampling for contaminants and reporting this information to the State Department of Health (DOH) who in turn report to the Environmental Protection Agency (EPA). USEPA uses this data to ensure that consumers are receiving clean water and verify that states are enforcing the drinking water regulations.

### **How do contaminants get in my water supply?**

- Microbial, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic chemicals, 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, mining or farming activities.
- Pesticides and herbicides, which may come from a variety of sources such as agricultural, residential application, and storm water runoff
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are a by-product of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants that are naturally occurring.

### **Who is at risk?**

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone 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 the 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 (1-800-426-4791).

### **Should I buy bottled water?**

You do not need to buy bottled water for health reasons if your drinking water meets all of the federal and state drinking water standards. If you want a drink with a different taste, you can buy bottled water, but it costs up to 1,000 times more than your tap drinking water. Of course, in emergencies bottled water can be a vital source of drinking water.



In order to ensure that the tap water is safe to drink, the Department of Health and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

**Annual Water Quality Report  
(Consumer Confidence Report)  
Reporting Year: 2008  
Horsehead Bay Water System  
STATE ID# 308782**



## System Specific Details

**Horsehead Bay Water System** is served by one well located on the hill in the south portion of the service area. There is a five (5) horsepower submersible pump in the well that fills a 13,750 gallon reservoir. The water gains pressure via gravity as it runs downhill through the distribution system to your home.

In April 2008 the storage tank was drained and cleaned during routine maintenance. No problems were found during this work.

This system is not routinely chlorinated.

Horsehead Bay is **managed** by:



**Water Services**  
PO Box 78  
Gig Harbor, WA 98501  
**(253) 857-1511 or toll-free: 1-888-809-8021**  
Fax (253) 857-1590  
<http://www.penlight.org>

## Arsenic

**Your drinking water currently meets EPA's revised drinking water standard of 10 ppb (or 0.010 ppm) for arsenic.** There is a small chance that some people who drink water containing low levels of arsenic for many years could develop circulatory disease, cancer, or other health problems. Most types of cancer and circulatory disease are due to factors other than exposure to arsenic. EPA's standard balances the current understanding of arsenic's health effects against the cost of removing arsenic from the water.

## Asbestos

Source water can contain asbestos from erosion of natural deposits. Asbestos can be found in distribution system water because of decay of asbestos cement pipe regardless of whether or not source contains asbestos. **None of the distribution lines supplying water to your home consists of asbestos cement (AC) pipe.**

## Fluoride

EPA's MCL for fluoride is 4.0 ppm. However, our state has set a lower MCL to protect human health. In Washington State, the MCL is 2 ppm. **Fluoride is not added to your water.** If you have concerns about dietary or dental fluoride requirements, we recommend you consult with your health or dental care provider.

## Lead

**Lead for your water system is below the federal-state action level of 0.015 ppm.** It is possible that lead levels in your home may be higher than at other homes in your community as a result of material used in your plumbing. Infants and children are typically more vulnerable to lead in drinking water than the general population.

## Nitrate

**Nitrate for your water system is below the federal-state maximum contaminant level of 10 ppm.** Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six (6) months of age. High nitrate levels in drinking water can cause blue baby syndrome. If you are caring for an infant and have concerns, you should ask for advice from your health care provider.

## Radionuclides (Gross Alpha and Radium-228)

Radionuclides are naturally occurring in groundwater, but also come from several manmade sources. At high exposure levels, alpha emitters are believed to cause cancer in humans. **Gross alpha samples were a new requirement for 2003. Your drinking water for Gross Alpha radionuclides was not detectable (ND) in 2004.**

Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer. **Radium 228 was sampled in 2007 and was not detectable (ND).**

## Other Sources of Information

Washington Dept. of Health Drinking Water Program  
1-800-521-0323 (toll-free)  
<http://www.doh.wa.gov/ehp/dw>

USEPA Office of Ground Water and Drinking Water  
Safe Drinking Water Hotline: 1-800-426-4791 (toll-free)  
<http://www.epa.gov/OGWDW/>

## Annual Water Quality Report (Reporting Year: 2008 for #308782)

The table below shows the results of water quality monitoring results for contaminants in your water supply. The presence of contaminants does not necessarily indicate that water poses a health risk. All other contaminants required to be monitored but not listed were either below the standard detection limits and/or MCL. *(NOTE: Highest value of most recent results for all sources listed below.)*

<b>Microbiological – Coliform Bacteria</b> (measured in distribution system)	<b>Results: Two total coliform samples were unsatisfactory in 2008.</b>				
	<b>Action: None required. Repeat samples satisfactory.</b>				
	Source: Bacteria are naturally occurring in the environment and are used as an indicator that other potentially harmful bacteria may be present.				
<b>Primary Contaminants</b> (measured at source)	SRL	MCL	Your Water System	MCL Violation Yes/No	Typical Source of Contamination
Arsenic (ppm)	0.010	0.010	<0.002	No	Most arsenic in drinking water comes from natural rock formations
Nitrate (ppm)	0.5	10	1.5	No	Runoff from fertilizer use, leaching from septic tanks; and erosion of natural deposits
<b>Secondary Contaminants</b> (measured at source)	Secondary contaminant standards are set for other than health effects such as taste and odor.				
Chloride (ppm)	20	250	6	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Fluoride (ppm)	0.2	2	<0.2	No	Erosion of natural deposits – no fluoride is added to water supply
Iron (ppm)	0.1	0.3	<0.1	No	Occurs naturally in water as a result of the leaching of iron salts from the earth and occurs as a result of corrosion of pipes
Manganese (ppm)	0.01	0.05	<0.01	No	Occurs naturally in water as a result of erosion of natural deposits
<b>State Regulated / Other</b> (measured at source)	Although the State Board of Health has not established MCLs for sodium, there is sufficient public health significance connected with this contaminant to require inclusion in inorganic chemical and physical source monitoring.				
Hardness (ppm)	10	NA	98	NA	A quality of water containing dissolved components of calcium and magnesium
Sodium (ppm)	5	NA	9	NA	Naturally occurring; discharge from fertilizer and aluminum factories
Turbidity (NTU)	0.1	NA	0.4	NA	Turbidity is a measure of the cloudiness of water. High turbidity can hinder the effectiveness of disinfectants.
<b>Corrosion By-products</b> (measured at customer taps)	SRL	AL	90 <sup>th</sup> percentile result is reported below. (Out of every 10 homes sampled, 9 were at or below this level.) NOTE: 0.015 ppm (parts per million) = 15 ppb (parts per billion)		
Lead (ppm)	0.002	0.015	0.002	No	Corrosion of household plumbing; erosion of natural deposits
Copper (ppm)	0.02	1.3	.63	No	Corrosion of household plumbing; erosion of natural deposits
<b>Regulatory Water Quality Monitoring Schedule</b>					
<b>Water Quality Parameter</b>	<b>Sample Frequency</b>	<b>Last Tested</b>	<b>Key Words and Definitions</b>		
Microbiological (coliform bacteria)	Monthly	May 2009	<b>AL</b> – Action Level – the concentration of contaminants, which triggers treatment or other requirements that a water system must follow <b>DOH</b> – Department of Health (Washington State) <b>MCL</b> – Maximum Contaminant Level – the highest level of contaminant allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology. <b>MCLG</b> – MCL Goal – the level of contaminant in drinking water, below which there is no known or expected health risk. MCLG's allow for a margin of safety. <b>NA</b> – Not applicable <b>ND</b> – Not detectable <b>PPM</b> – parts per million (1 ppm = 1 milligram per liter; mg/L) <b>PPB</b> – parts per billion <b>SDWA</b> – Federal Safe Drinking Water Act <b>SRL</b> – State Reporting Level <b>USEPA</b> – US Environmental Protection Agency		
Nitrates	Annually	Sept 2008			
Inorganic Contaminants (IOCs)	Every 36 months	Sept 2008			
Volatile Organic Chemicals (VOCs)	Every 36 months	Mar 2006			
Synthetic Organic Chemicals (SOCs)	Every 36 months	Oct 2005			
Radionuclides (Gross Alpha and Radium 228)	Every 36 months	Oct 2004(GA) Aug 2007(Ra)			
Asbestos (distribution system)	Every 9 years	NA			
Lead and Copper (customer tap)	Per DOH	Oct 2008			

# State Water Use Efficiency and Water Conservation Mandate

## New State Rule Effective January 2007

Growing communities place an increasing demand on our state's Water Resources. To help meet these growing needs and conserve water for both the environment and future generations, the Washington State Legislature passed the Municipal Water Law in 2003. This law gives municipal water suppliers certain benefits and obligations. One of these obligations is to comply with the Water Use Efficiency Rule.

## Who does the Rule Effect?

The Water Use Efficiency Rule affects all municipal water suppliers, which includes all Group A community water systems with 15 or more residential connections and some non-community systems that use water in a residential manner. *Your water system is affected by this rule.*

## What are the Requirements?

The rules require water systems to use water efficiently and demonstrate that they are doing so. Specifically, water systems must:

- Develop a plan through a public process, establish efficiency goals and enact measures to manage water use.
- Reduce distribution system leakage to 10 percent or less.
- Install service meters within 10 years, if not already installed, to account for usage and leakage.
- Report annually on their progress in using water efficiently beginning in 2009 for systems under 1,000 connections.



## “Dirty Water!”

### What is it and what happened?

As many water system users are aware, many wells in our area are no strangers to the nuisance *iron and manganese*. These common minerals found at various levels in most source waters can cause problems from discolored water, to staining of plumbing fixtures and some may even affect taste. These problems occur **before** becoming a health hazard and are generally referred to as aesthetic issues only. Because these minerals build up over time on most portions of the distribution system, flushing is done by the system operator to minimize negative effects.

Despite these efforts, problems can and still do occur. Mostly during water system use changes, like a seasonal change of higher volume use, discolored water is seen from the break up of mineral build up. This can be isolated to a customer's home only, or be in all or a portion of the distribution system requiring the **unplanned** flushing of the system. In such cases the flushing may initially make the problem worse by stirring up even more of the mineral discoloration. Running a few taps for 15 to 20 minutes should clear up the problem.

Iron and manganese removal systems are available though can be very costly for utilities because of the volume of water that would need to be treated. Many homeowners decide to have a single house system installed. There are many to choose from and having the right system for your needs is important. Be sure samples are collected after a new system is installed to ensure it's doing what it's supposed to do.

## Conservation Tips

- ◆ Skip a scheduled watering after a moderate rainfall and decrease watering in cool or humid conditions.
- ◆ Check household faucets and toilets for leaks. Even a slow leak can amount to 10 to 25 gallons per day.
- ◆ Keep a pitcher of water in the refrigerator or use refrigerator tap instead of running tap for cool water.
- ◆ Use a broom to sweep your driveway, garage, or sidewalk instead of using water.
- ◆ Use a bucket of water to wash your bike or car and rinse quickly with a hose.
- ◆ Use water only when you need it. Do not leave water running; be sure to turn it off when you are finished!

We would also like to encourage *\*Even/Odd Watering\** for the summer months. This is voluntary, but this simple change in your watering habits will make a huge difference in the summer water peak demands. It will also help all customers by reducing water bills and helps maintain reservoir levels to deal with fires and emergencies. Addresses ending in *even numbers only water on Monday, Wednesday and Friday* (e.g. 354 Water St). Addresses ending in *odd numbers only water on Tuesday, Thursday and Sunday* (e.g. 897 Water St).

*PLEASE refrain from watering* lawns between peak use periods (5:00 a.m. and 7:00 p.m.) Outdoor watering should not coincide with high inside demand periods. In addition, during the middle of the day there is excessive evaporation-transpiration loss.

*Please help us protect your water supply* by reporting any suspicious activity or unauthorized connection to the water system, such as fire hydrant use, by anyone other than PLC or your local fire department.