

# Annual Water Quality Report

CITY OF SEQUIM (JULY 2008)

## **Just Some History of Sequim's Water System:**

A study of the City of Sequim's water system was completed in 1973. As a result of this study, additional water system improvements were made to the City's water system. These improvements included covering the City reservoir, metering connections, and replacement of sub-standard water lines. Another report was completed by 1983, which addressed issues of water quality, water resources, and conservation realized as a result of the installation of City-wide water meters. Improvements made to the City's water system which were recommended in this report included covering the 500,000 gallon reservoir, development of the Silberhorn Well Field, installation of a chlorination system in the intake piping, and construction of a new infiltration gallery on the Dungeness River. In 1986, a high-pressure zone reservoir was constructed and the Silberhorn Well Field was brought on line. The City's 1.7 million-gallon (MG) reservoir was constructed in 1996 with the new 1.0 million gallon reservoir completed in the southeast corner of the City providing a higher-pressure zone for the City. The first Port Williams Well No. 1 was drilled in 1995. A pressure-reducing valve (PRV) and booster station have been constructed at 5<sup>th</sup> Avenue and McCurdy and at Simdars Road. In 1998 additional pipelines and a PRV at 3<sup>rd</sup> Avenue and McCurdy were constructed and Port Williams Well No. 2 was drilled and equipped. Today, the Port Williams Well No. 3 is under construction.

## **Water Quality Protection Programs**

The City is committed to supplying its customers with high quality drinking water. The City has adopted a new comprehensive plan to ensure that the drinking water supplied to its customers meets or exceeds all Federal and State standards.

## **The City of Sequim's Water System Comprehensive Plan**

This plan has been approved by the Sequim City Council, Department of Health and Department of Ecology. The plan analyzes all aspects of the water system, identifying current and future plans by the City to continue to provide high quality drinking water to its customers. The City's Water Comprehensive Plan must be updated every sixth year.

## **Water Conservation Program**

The Water System Comprehensive Plan recommends many ways in which the City and its residents can help preserve and protect our water resources. See page 3 under Water Conservation.

## **Water Storage**

Commercial and domestic demand, fire protection, storage, and emergency use water storage is provided by four reservoirs. The combined storage capacity of all four reservoirs is

3,400,000 gallons of water. This includes the new 1,000,000 gallon reservoir located near the east City limits.

### **Water Quality Monitoring Requirements**

Existing State law requires water systems to monitor for numerous contaminants on a regular basis. The City is in compliance with existing water quality monitoring requirements. Page 7 indicates the water quality tests regularly performed by the City.

### **Wellhead Protection Program**

The Water System Comprehensive Plan sets protective boundaries around the City's wells, identifies potential contamination sources around the wells and provides notification of these sites and City residents about wellhead protection.

**If you see a potential problem let us know.**

### **Drinking Water Wells**

To protect your drinking water wells, follow the Department of Ecology's Home Owners Guide to Well Construction. You may also refer to the Washington State Administrative Code (WAC) 173-160-171. Sequim welcomes input and would be happy to supply you with additional information. Residents with input or who would like more information may contact City staff at 360-683-4908 or visit [www.ci.sequim.wa.us](http://www.ci.sequim.wa.us).

### **General Health Effects Information**

While traveling through the ground, groundwater dissolves some of the naturally occurring minerals that may contain substances resulting from the presence of animals or human activity. Contaminants that may be present include microbes, inorganic and organic chemicals, pesticides, herbicides, and radioactive materials. To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water which are required to meet the same standards as public drinking water.

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 organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly and also infants can particularly be at risk for infections. To lessen the risk of infection by *Cryptosporidium* and other microbial contaminants, these people should seek advice from EPA, Centers for Disease Control and the Safe Drinking Water Hotline (800-426-4791).

The City of Sequim's water sources do not contain lead or copper. However, lead and copper can leach into residential water from building plumbing systems. Lead and copper monitoring is conducted at homes categorized as high risk and under worst case conditions. Homes or buildings that were built or re-plumbed with copper pipes and lead-based solder are considered to be high risk. The use of lead-based solder was stopped in 1985.

## Water Conservation for You

### Save Water Indoors

The average family uses 21.7% of their water washing clothes, 1.4% washing dishes, 15.7% using faucets, 16.8% showering, 26.7% flushing toilets, 13.7% on leaks, 1.7% taking baths, and 2.2% on other uses.

### Here's How:

#### Save Water in the Bathroom

- **Check all faucets, pipes, and toilets periodically for leaks**  
A faucet drip or invisible leak in the toilet will add up to 15 gallons of water a day, or 105 gallons a week, which adds up to 5,475 gallons of wasted water a year. Check your flapper periodically to make sure it's a tight fit.
- **Install water saving shower heads**  
Low-flow showerheads deliver 2.5 gallons of water per minute or less and are relatively inexpensive. Older showerheads use 5 to 7 gallons per minute.
- **Take shorter showers or shallow baths.**  
Simply taking shorter showers will save gallons of water. For long exposures to the water, a partially filled bath instead of a shower will use less water.
- **Install a 1.6 gallon low-flow toilet.**  
Ultra-low flow toilets use only 1.6 gallons of water per flush. Using these could cut indoor water use by as much as 20%. Older toilets use 3.5 to 5 gallons per flush.
- **Check for toilet leaks**  
Once a year, check for toilet leaks. Remove the toilet tank cover and drip 10 drops of food coloring into the tank. After 15 minutes, check for color in the toilet bowl. If you see any color, your toilet has a leak and should be repaired immediately. Again, remember to check your flapper periodically to make sure it's a tight fit.
- **Don't use the toilet as a wastebasket.**  
Using a wastebasket instead of the toilet for tissues and other bits of trash will save gallons of water that are otherwise wasted.
- **Fix leaky faucets. immediately.**  
A leaky faucet may simply need a new washer. Small faucet leaks can waste 20 gallons of water a day. Large leaks can waste hundreds of gallons.
- **Turn off the water while shaving, brushing teeth, etc.**  
Don't let the water run when you brush your teeth, wash your face or hands, or shave. This can save 3 to 7 gallons per minute.

## Save Water in the Kitchen and Laundry

- **Fill your dishwasher**

Your dishwasher uses the same amount of water whether it is full or just partially full of dishes, so be sure to fill it. Many dishwashers have a water saver cycle to save even more water.

- **Select proper water level laundry**

Unlike your dishwasher, you can control the amount of water used by your clothes washers. Select the proper water level for each load of laundry.

Water Loss in Gallons at 60 P.S.I.	
Leak this Size	Loss per Month
1/32"	6000
1/16"	25,000
1/8"	100,000
1/4"	400,000

### Questions:

- **How can I get more involved in decisions affecting my drinking water?**

*The Sequim City Council regularly meets at 6:00 p.m. at the Sequim Transit Center on the second and fourth Monday of each month at 190 West Cedar Street.*

- **Is bottled water cleaner and safer than tap water?**

*Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Since The Federal Food and Drug Administration regulates contaminants in bottled water and is responsible for providing the same levels of public health protection as public water systems, bottled water is not necessarily cleaner or safer than tap water.*

- **Why is chlorine added to my water?**

*Pursuant to state and federal laws, very small amounts of chlorine are added to your water as a disinfecting agent to protect you from disease-causing microorganisms. If you are bothered by the chlorine taste, keep a pitcher of tap water in the refrigerator. The chlorine will dissipate rapidly if the water is allowed to sit for a time.*

## **PROTECTING OUR WATER SUPPLIES**

People have grown understandably concerned about the safety of America's drinking water supply. It is a concern we all share and the City of Sequim has been working hard with our Emergency Management partners, EPA, DOE, DOH, Homeland Security and others in the drinking water industry to provide you with a safe and reliable water system.

- **Is our drinking water supply safe from attack?**

The threat of contamination of drinking water through terrorist activities is reduced by a number of factors. Most contaminants would need to be used in very large quantities. The City of Sequim along with many other water systems that serve towns and cities have treatment processes in place. However, much needs to be done to assure that **all** water supplies are adequately protected, including private wells and bottled water.

A critical element of homeland security lies in the vitality of our environment, primarily defined by the availability and quality of our air and water resources. Security efforts must include advanced understanding, assessment and prediction of natural and human-induced variations in our environment, enabling new policies and planning, allocation of resources, and partnership strategies. Whether the cause is terrorist, an accident or a natural disaster, the effort is needed to avoid and alleviate air and water-related threats. We must identify and assess the current threats, to evaluate various preventative and corrective actions, and to predict future threats. The City of Sequim is hard at work, providing the necessary elements to protect your water systems.

- **What kinds of threats are there to drinking water?**

The primary threats to our water supplies are damage, destruction, or sabotage of physical infrastructure.

- **Is bottled water safer than water from my tap?**

Bottled water is not necessarily safer than your tap water. Bottled water is valuable in emergency situations (such as floods and earthquakes). In most cases, bottled water comes from a water source just like water from your tap. The safety of bottled water depends on the safety and emergency response plans in place at the bottling plant and at your home.

- **Will boiling water help if a problem occurs?**

Boiling water is effective in removing certain contaminants. When microorganisms, like those that indicate fecal contamination, are found in drinking water, water suppliers may be required to issue boil water notices. Boiling water kills these organisms that can cause disease. However, boiling water containing certain contaminants may increase the concentration and the potential risk. It is best to check with your local water utility or Health Department to determine if boiling water is necessary.

- **If a attack on my water supply is carried out, how will I know? Will I be able to tell if my water is contaminated?**

In the unlikely event of an attack on your local water system, the Public Works Department would activate the City of Sequim’s Emergency Management Plan with the help from local law enforcement, County and State emergency officials. These plans provide for notifying the public of any emergency and steps that need to be taken.

- **What should I do if I see someone around the City’s drinking water supply that looks suspicious?**

Contact your local law enforcement by dialing **9-1-1** to report a suspicious event.

## Reading the Table

**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 available treatment technology.

**MCLG (Maximum contaminant level goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MFL (Million fibers per liter):** Unit of measure for asbestos fibers greater than 10 mm in length.

**NTU (Nephelometric turbidity unit):** The unit of measure for turbidity.

**PPM (Part per million):** One part per million or one milligram per liter (mg/L).

**Secondary MCLs:** MCLs based on factors other than health effects such as taste and aesthetics.

**TTHMs (Total Trihalomethanes):** Contaminants created from the reaction of chlorine and water. The result shown is an average of samples from 1990 and 1997.

**DOH (Department of Health):** Washington State Department of Health.

**VOC: Volatile Organic Chemicals**

**Table 1  
Water Quality Monitoring Requirements**

<b>Parameter</b>	<b>Sample Location</b>	<b>Frequency</b>
Routine Coliform	Distribution System	7 Per Month
Turbidity	Source of Supply	Every Day
Inorganics	Source of Supply	Every 3 Years
VOCs	Source of Supply	Every 3 Years
SOCs	Source of Supply	Every 3 Years
Lead and Copper	Distribution System	Every 3 Years
Trihalomethanes	Distribution System	Every Year
Radionuclides	Source of Supply	Every 4 Years
Chlorine Testing	Distribution System	Every Day

These tests are from July 2007

Table 2

Water Quality Data (Regulated by EPA, State and other)

Source — (S01) Infiltration System

	Analytes	Results	Units	SRL	Trigger	MCL
4	Arsenic	<(0.003)	mg/L	0.003	0.005	0.01
5	Barium	<(0.4)	mg/L	0.1	2	2
6	Cadmium	<(0.002)	mg/L	0.01	0.005	0.005
7	Chromium	<(0.02)	mg/L	0.01	0.1	0.1
11	Mercury	<(0.0004)	mg/L	0.0004	0.002	0.002
12	Selenium	<(0.005)	mg/L	0.005	0.05	0.05
110	Beryllium	<(0.0008)	mg/L	0.003	0.004	0.004
111	Nickel	<(0.1)	mg/L	0.04	0.1	0.1
112	Antimony	<(0.005)	mg/L	0.005	0.006	0.006
113	Thallium	<(0.002)	mg/L	0.002	0.002	0.002
116	Cyanide	<(0.1)	mg/L	0.1	0.2	0.2
19	Fluoride	<(0.5)	mg/L	0.5	2	4
114	Nitrite	<(0.2)	mg/L	0.2	0.5	1
20	Nitrate	<(0.5)	mg/L	0.5	5	10
161	Total Nitrate/Nitrite	<(0.5)	mg/L	0.5	5	10
8	Iron	<(0.10)	mg/L	0.1	0.3	0.3
10	Manganese	<(0.01)	mg/L	0.01	0.05	0.05
13	Silver	<(0.1)	mg/L	0.01	0.1	0.1
21	Chloride	<(20)	mg/L	20	250	250
22	Sulfate	<(50)	mg/L	50	250	250
24	Zinc	<(0.20)	mg/L	0.2	5	5
14	Sodium	<(5.00)	mg/L	5		
15	Hardness	56	mg/L	10		
16	Conductivity	114	mg/L as CaCO	10	700	700
17	Turbidity	0.05	mg/L	0.1	1	1
18	Color	<(15)	Color Units	5	15	15
9	Lead	<(0.001)	mg/L	0.002		
23	Copper	<(0.02)	mg/L	0.2		

**Notes:**

**SRL:** (State Reporting Level), indicates the minimum reporting level required by the Washington Department of Health (DOH).

**Trigger Level:** DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level are required to take additional samples. Contact your regional DOH office for further information.

**MCL:** (Maximum Contaminant Level), If the contaminant amount exceeds the MCL, immediately contact your DOH office.

**NA:** (Not Analyzed), in the results column indicates this compound was not included in the current analysis.

**ND:** (Not Detective), in the results column indicates this compound was analyzed and not detected at a level greater than or equal to the SRL.

**>(0.001):** Indicates the compound was not detected in the sample at or above the concentration indicated.

These tests are from July 2007

Table 2

Water Quality Data (Regulated by EPA, State and other)

**Source — Silberhorn (S02)**

	Analytes	Results	Units	SRL	Trigger	MCL
4	Arsenic	<(0.003)	mg/L	0.003	0.05	0.01
5	Barium	<(0.4)	mg/L	0.1	2	2
6	Cadmium	<(0.002)	mg/L	0.01	0.005	0.005
7	Chromium	<(0.02)	mg/L	0.01	0.1	0.1
11	Mercury	<(0.0004)	mg/L	0.0004	0.002	0.002
12	Selenium	<(0.005)	mg/L	0.005	0.05	0.05
110	Beryllium	<(0.0008)	mg/L	0.003	0.004	0.004
111	Nickel	<(0.01)	mg/L	0.04	0.1	0.1
112	Antimony	<(0.005)	mg/L	0.005	0.006	0.006
113	Thallium	<(0.002)	mg/L	0.002	0.002	0.002
116	Cyanide	<(0.1)	mg/L	0.01	0.2	0.2
19	Fluoride	<(0.5)	mg/L	0.5	2	4
114	Nitrite	<(0.2)	mg/L	0.2	0.5	1
20	Nitrate	<(1.66)	mg/L	0.5	5	10
161	Total Nitrate/Nitrite	<(1.66)	mg/L	0.5	5	10
8	Iron	<(0.10)	mg/L	0.1	0.3	0.3
10	Manganese	<(0.01)	mg/L	0.01	0.05	0.05
13	Silver	<(0.1)	mg/L	0.01	0.1	0.1
21	Chloride	<(20)	mg/L	20	250	250
22	Sulfate	<(50)	mg/L	50	250	250
24	Zinc	<(0.2)	mg/L	0.2	5	5
14	Sodium	<(5.0)	mg/L	5		
15	Hardness	140	mg/L	10		
16	Conductivity	256	mg/L as CaCO	10	700	700
17	Turbidity	0.05	mg/L	0.1	1	1
18	Color	<(15)	Color Units	5	15	15
9	Lead	<(0.001)	mg/L	0.002		
23	Copper	<(0.02)	mg/L	0.2		

**Notes:**

SRL: (State Reporting Level), indicates the minimum reporting level required by the Washington Department of Health (DOH).

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level are required to take additional samples. Contact your regional DOH office for further information.

MCL: (Maximum Contaminant Level), If the contaminant amount exceeds the MCL, immediately contact your DOH office.

NA: (Not Analyzed), in the results column indicates this compound was not included in the current analysis.

ND: (Not Detective), in the results column indicates this compound was analyzed and not detected at a level greater than or equal to the SRL.

>(0.001): Indicates the compound was not detected in the sample at or above the concentration indicated.

These tests are from July 2007

Table 2

Water Quality Data (Regulated by EPA, State and other)

Source — Port Williams

	Analytes	Results	Units	SRL	Trigger	MCL
4	Arsenic	<(0.003)	mg/L	0.003	0.005	0.01
5	Barium	<(0.4)	mg/L	0.1	2	2
6	Cadmium	<(0.002)	mg/L	0.01	0.005	0.005
7	Chromium	<(0.02)	mg/L	0.01	0.1	0.1
11	Mercury	<(0.0004)	mg/L	0.0004	0.002	0.002
12	Selenium	<(0.005)	mg/L	0.005	0.05	0.05
110	Beryllium	<(0.0008)	mg/L	0.003	0.004	0.004
111	Nickel	<(0.01)	mg/L	0.04	0.1	0.1
112	Antimony	<(0.005)	mg/L	0.005	0.006	0.006
113	Thallium	<(0.002)	mg/L	0.002	0.002	0.002
116	Cyanide	<(0.1)	mg/L	0.1	0.2	0.2
19	Fluoride	<(0.5)	mg/L	0.5	2	4
114	Nitrite	<(0.2)	mg/L	0.2	0.5	1
20	Nitrate	<(0.5)	mg/L	0.5	5	10
161	Total Nitrate/Nitrite	<(0.5)	mg/L	0.5	5	10
8	Iron	<(0.10)	mg/L	0.1	0.3	0.3
10	Manganese	<(0.01)	mg/L	0.01	0.05	0.05
13	Silver	<(0.1)	mg/L	0.01	0.1	0.1
21	Chloride	<(20)	mg/L	20	250	250
22	Sulfate	<(50)	mg/L	50	250	250
24	Zinc	<(0.2)	mg/L	0.2	5	5
14	Sodium	<(10.5)	mg/L	5		
15	Hardness	164	mg/L	10		
16	Conductivity	311	mg/L as CaCO	10	700	700
17	Turbidity	<(0.5)	mg/L	0.1	1	1
18	Color	<(5)	Color Units	5	15	15
9	Lead	<(0.001)	mg/L	0.002		
23	Copper	<(0.02)	mg/L	0.2		

Notes:

SRL: (State Reporting Level), indicates the minimum reporting level required by the Washington Department of Health (DOH).

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level are required to take additional samples. Contact your regional DOH office for further information.

MCL: (Maximum Contaminant Level), If the contaminant amount exceeds the MCL, immediately contact your DOH office.

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ND: (Not Detective), in the results column indicates this compound was analyzed and not detected at a level greater than or equal to the SRL.

>(0.001): Indicates the compound was not detected in the sample at or above the concentration indicated.

# Water Testing for 2008

The City of Sequim is testing for mercury and calcium at the River Well / Dungeness River. We are also testing for nitrates at our three water sources, which are the River Well / Dungeness River, Silberhorn Well Field and Port Williams Well Field. The City has also performed a Water Age Dating Project on the Silberhorn Well Field and Port Williams Well Field. Testing for Trihalomethanes, haloacetic acids and bromate in the water system is also in progress. These tests will be taken to be sure that the sodium hypochlorite the City uses for disinfection is not affecting the City's water quality. All of these tests will be performed in July 2008 and the test results will be included in the 2009 Annual Water Quality Report as well as the Water Age Dating Project results. The City of Sequim has also added three more Coliform testing sites. Since the City has expanded, the water testing will expand. Seven sites will be checked monthly for Coliform.

# NOTICE TO WATER SYSTEM USERS

## DISINFECTION BYPRODUCTS MONITORING VIOLATION

This monitoring violation was caused by testing in the wrong month; these tests were taken the second week of November; results passed showing no evidence of contamination.

We, the City of Sequim, Water System, I.D. 77620Y, located in Clallam County are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the third quarter in the year of 2007, we did not monitor or test for Total Trihalomethanes, Haloacetic Acids, and Bromate and therefore cannot be sure of the quality of your drinking water during that time.

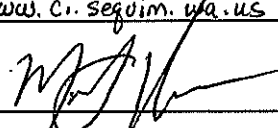
As determined by the Department of Health, at this time:

- No action is required by the users.
- Samples will be collected in the future as required.
- Other information for customers:

For more information, contact the City of Sequim at (360)683.4908 or at 615 N 5<sup>th</sup> Ave. Sequim WA 98382.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is sent to you by the City of Sequim Water System on 7 / 1 / 08

<b>Disinfection Byproducts Monitoring Public Notice Certification Form</b>		
The purpose of this form (below) is to provide documentation to the department that public notice was distributed. Please check the appropriate box and fill in the date that the notice was distributed:		
<input type="checkbox"/>	Notice was mailed to all water customers on	___ / ___ / ___
<input type="checkbox"/>	Notice was hand delivered to all water customers on	___ / ___ / ___
<input checked="" type="checkbox"/>	Notice was posted (with department approval) at:	
	<u>www.ci.sequim.wa.us</u>	on <u>7 / 1 / 08</u>
	<u>Lead Water Operator</u>	<u>6/30/08</u>
Signature of owner or operator	Position	Date
The Department of Health is an equal opportunity agency. For persons with disabilities, this form is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).		
<b>Send copy of completed notification and certification to:</b>		
<b>Southwest Regional Office, PO Box 47823, Olympia WA 98504 or fax to (360) 664-8058</b>		

