City of St. Helens Water Department

2008 Water Quality Report

Water Quality

The City of St. Helens Water Department is providing this summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that utilities issue an annual "Consumer Confidence" report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent.

City of St. Helens Water Department is committed to providing you with the safest and most reliable water supply. Informed customers are our best allies in maintaining safe drinking water.

We are required by the Oregon State Health Division to take 10 routine water samples monthly from designated areas throughout the city, testing for microbiological contaminants in the drinking water.

We have been continuing to upgrade and improve our water quality and service by installing new water mains and having a leak detection survey done to help reduce water loss.

Water Source

The St. Helens Water Department supplies the city with water from a new water treatment facility located in Columbia City and one Ground Well located near Scappoose Bay Marina. The Scappoose Bay well only operates during very high usage days in the summer. There are two wells on the banks of the Columbia River in Columbia City that supply water to the treatment plant.

The water treatment facility is a membrane plant that works by running water through a series of synthetic filters that capture sediment, germs and organisms. These filter systems are fully computer-controlled for automatic backwashing and cleaning. There are no chemical additions, except for standard chlorine disinfection and acidity controls. The system requires very little daily hands-on operational duties aside from the computer-controlled monitoring of water quality. That differs from the traditional sand filtration or chemical treatment plants that require constant operational tasks to operate. The investment in systems, controls and the more expensive synthetic filters will be more than offset over the life of the plant by greatly reduced staff and maintenance requirements.

During the summer months when usage is higher, the City produces over 4 million gallons of water per day. This serves over 11,500 residents through over 4,000 service connections. During the fall and winter months, this usage falls to just over 2 million gallons per day.

You can contact St. Helens City Hall at 503-397-6272 with questions or for information about the next opportunity for public participation in decisions about your drinking water.

How to Read This Table

This report is based upon the most recent tests conducted by the City of St. Helens Water Department. Testing frequency is determined by the Oregon Health Division. Terms used in the Water Quality Table and in other parts of this report are defined here.

- **Maximum Contaminant Level or MCL**: 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.
- **Maximum Contaminant Level Goal or MCLG**: 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.
- **Treatment Technique or TT**: A required process intended to reduce the level of a contaminant in drinking water.

The data presented in this report is from the most recent testing done in accordance with regulations. Test results can also be viewed on the Oregon Health Division's website at **http://170.104.158.45/** Our PWS Number is 4100724.

Key to Table

MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
TT = Treatment Technique

ppm = parts per million or milligrams per liter (mg/l)
ppb = parts per billion or micrograms per liter (ug/l)
NTU = Nephelometric Turbidity Unit

Contaminant	Date Tested	Range Min. - Max.	Detected Level	Unit	MCL	MCLG	Violation	Major Sources
Sulfate	12/8/05	n/a	7.0	ppm	250.0	n/a	NO	Naturally occurring
Nitrate	4/24/08	n/a	1.7	ppm	10.0	n/a	NO	Naturally occurring
Uranium	4/3/03	n/a	0.04	ppb	30.0	n/a	NO	Natural or Industrial
TTHMs	Quarterly	8.1 – 9.7	9.0	ppb	80	n/a	NO	Disinfection Byproduct
Turbidity	Daily	.020 - .079	.079	NTU	TT = 0.3	n/a	NO	Soil Runoff, Sediment

Water Quality Table Footnotes

All contaminants tested were below the Maximum Contaminant Level and none were in violation.

Mandatory Testing

The contaminants we monitor for are listed below. Only the ones listed in the table above had detectable levels.

Microbiological Contaminants
Total Coliform Bacteria
Fecal Coliform
Turbidity

Radioactive Contaminants
Beta/photon emitters
Alpha emitters
Combined Radium

Inorganic Contaminants
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Copper
Cyanide
Fluoride
Lead
Mercury (inorganic)
Nickel
Nitrate (as Nitrogen)
Nitrite (as Nitrogen)
Selenium
Sodium
Sulfate
Thallium

Synthetic Organic Contaminants
2,4D
2,4,5-TP (Silvex)
Alachlor
Atrazine
Benzo(a)pyrene (PAH)
Carbofuran
Chlordane
Dalapon
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl)phthalate
Dibromochloropropane
Dinoseb
Diquat
Endothall
Endrin
Ethylene dibromide
Glyphosate
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Lindane
Methoxychlor
Oxamyl (Vydate)
PCBs (Polychlorinated)
Pentachlorophenol
Picloram
Simazene
Toxaphene

Volatile Organic Contaminants
Benzene
Carbon Tetrachloride
Chlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
1,2 – Dichloroethane
1,1 – Dichloroethylene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Dichloromethane
1,2, - Dichloropropane
Ethylbenzene
Styrene
Tetrachloroethylene
1,2,4-Trichlorobenzene
1,1,1 – Trichloroethane
1,1,2 – Trichloroethane
Thrichloroethylene
TTHMs
Toluene
Vinyl Chloride
Xylenes

Lead and Copper Testing

Substance	Units	Goal	Action Level (AL)	90th Percentile	Homes Exceeding Action Level	Complies?	Source of Contaminate
Copper	ppm	1.3	1.3	0.61	0	Yes	Corrosion of household plumbing
Lead	ppb	0	15.5	2	0	Yes	Corrosion of household plumbing

The 90th percentile is the highest result found in 90% of the samples when they are listed in order from the lowest to the highest results. EPA requires testing for lead and copper at customers' taps most likely to contain these substances based on when the house was built. The EPA determined that the sample results did not exceed the Action Level (AL). Due to the low results in the last two rounds of testing, in the future, we will be required to take 30 lead and copper samples instead of 60.

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 St. Helens 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 water for 30 seconds to two 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 www.epa.gov/safewater/lead.

Additional Health Information

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 at (800)426-4791.

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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, stormwater runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons 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/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at (800)426-4791.

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WATER SERVICE INFORMATION – A deposit of $30.00 will be required of consumers within the City limits and a deposit of $40.00 will be required of customers outside the City limits of St. Helens before water service will be furnished. All users of City water inside or outside the City of St. Helens shall pay $5.71 per month service charge for each water service meter in addition to the rate paid for water use.

Effective August 16, 2003, a Storm Drain Utility Fee was implemented in response to increased environmental requirements for storm water discharge, which has increased the City's maintenance and construction costs. The Storm Drain Utility fee has been set at $6.90 per month per equivalent residential unit. For a single family dwelling, this is equal to $13.80 per two-month billing cycle. Commercial rates are based on the number of EDUs for each business and are determined by taking the approximate total area (square feet) of impervious surface and dividing by 2,500.

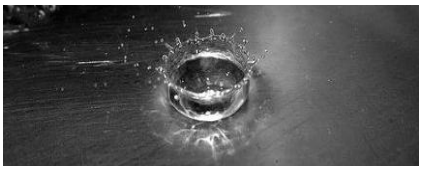
SENIOR CITIZEN SUBSIDY – The monthly water service subsidy shall be up to a maximum of $32.55 (1362 cu. ft.) per 2 month billing cycle for a home ***within*** the City limits that is occupied and either owned or rented by an individual over 65 years of age. An applicant for such a subsidy shall apply to the City Hall office and provide proof of age.

DELINQUENT ACCOUNTS – Upon failure to pay water charges due within the first ten days of a month, by the ***15th*** day of the month, the account shall be delinquent and a late charge of ***$5.00*** shall be added and by the ***25th*** day of the month, the account shall be assessed a ***$20.00*** delinquent fee and water service to the customer may be turned off.

RESTORATION CHARGE – A customer shall pay for restoration of water service when service has been ***disconnected*** because of non-payment. The customer shall then pay the sum of ***$20.00*** for re-connection fee.

OTHER WATER QUALITY INFORMATION –
Our backflow program helps prevent any potentially contaminated water from entering the City's water supply by having industrial, commercial or residential buildings install an approved backflow assembly. ***If you are considering installing a lawn sprinkler system, you are required to install an approved backflow assembly to help protect your drinking water and our water system.*** Contact our Building Department to find out more information at 503-397-6272.

If you have questions or need more information about your drinking water, contact the City of St. Helens Water Department at 503-397-3532.



City of St. Helens Water Department
P.O. Box 278
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More Information

CITY HALL (Billing) – Hours 8:30 am – 5:00 pm Mon. – Fri.
Phone 503-397-6272 Website www.ci.st-helens.or.us

WATER DEPARTMENT (Maintenance) – Hours 8:00 am – 4:30 pm Mon. – Fri. Phone 503-397-3532

AFTER HOURS EMERGENCY PHONE – 503-397-1521

REMEMBER - Water meters are ***City property*** and should not be tampered with. If you have a water or sewer emergency (such as a broken pipe or leak), call the Water Department or the After Hours Emergency number. Someone is on call 24 hours a day, 7 days a week.

WATER HEATER INFORMATION – The water system from the meter to your residence is a closed system. This means there is a check valve by the meter that does not allow water to flow back into the system from the service line. Your water heater should have a T/P valve to relieve excessive water temperature or pressure. We recommend that you inspect your T/P valve annually.

To do this, place a pan under the water outlet and lift the lever to verify good flow. Be careful – the water is very hot. If water drips from the pipe after operating the valve, trip it several times to get a better seal. If it continues to drip, the valve needs to be replaced.

Also, a licensed plumber can inspect, repair or replace your T/P valve to ensure your safety. A thermal expansion tank and pressure-relief toilet ball cock assembly can provide additional protection.

WATER CONSERVATION – Here are some helpful water conservation tips for your household:

Indoors

* Install low flow shower heads and aerators on the faucets.
* Don't let the water run while brushing your teeth.
* Fix any leaky plumbing or faucets.
* Flush only when necessary. Don't use your toilet as a garbage can.
* Keep a container of drinking water in the refrigerator instead of letting the faucet run until the water is cool.

Outdoors

* If the soil is moist, don't water. Allow the lawn to dry out between waterings. This will promote deeper root growth.
* Don't water on windy days. The wind will carry the spray away.
* Don't water during the hottest part of the day. Water in the mornings and evenings when the temperature is cooler.
* Remove weeds to prevent plant competition and cut down the amount of water needed.
* Use nozzles on hoses when washing your car instead of letting the water run.

WINTERIZATION - Freezing weather brings with it the possibility of broken pipes and fittings. Here are some winterizing tips:

* Leave cupboard doors open under sinks if plumbing is on outside walls. This allows pipes to get more heat.
* When the weather dips below freezing, let inside faucets run slightly to keep water moving in pipes.
* Shut off and drain outdoor irrigation systems during the winter months.
* Put covers on outdoor hose bibs and insulate any exposed pipes.
* Plug foundation vents to prevent pipes under the house from freezing.
* If you go on vacation, leave the heat on at least 55 degrees.

OUR EMPLOYEES – The City of St. Helens is committed to bringing you quality drinking water. Our Water Distribution Operators and Water Filtration Plant Operators are State Certified and receive annual training to keep their knowledge current.

Pharmaceuticals & Your Drinking Water

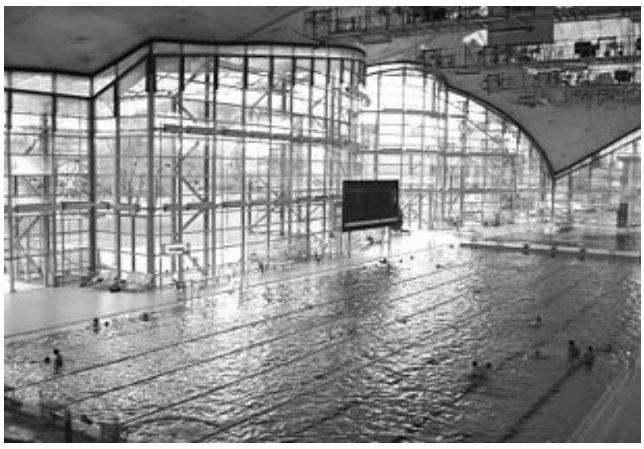
A few months back, a quickly stated and poorly researched news report about Pharmaceuticals and Personal Care Products (PPCP's) being detected in drinking water supplies around the United States, including the Portland area, planted not only an unstable seed of concern that public water supplies might not be safe to drink, but also generated an uneasy feeling that public water systems might not be providing full disclosure as to what is in our drinking water that might cause harmful health effects to the residents living in our own community.

The City of St. Helens takes great pride in providing our residents with fresh, reliable drinking water, so, to maintain consumer confidence, the very next morning after the report, we took positive steps to do specific research on the subject of PPCP's. We anticipated that there were going to be questions about how safe St. Helens water is and what are we doing to protect our residents. First, we found a reliable, certified water quality testing laboratory that specializes in the analysis of PPCP's and made immediate arrangements to collect samples of our raw water (our source water) and our finished water (after filtration) and find out what level of PPCP's are entering and leaving the St. Helens water supply. Our next challenge was finding reliable, documented information on this subject.

By the end of the first week we had collected pages of reliable information which provided us with informed answers for our valuable consumers. Our week of diligent research was not a minute too soon. The very next Monday, we started receiving phone calls from concerned residents that they were not finding answers to their questions from agencies such as EPA (Environmental Protection Agency), DHS of Oregon (Dept. of Health Services), water quality and testing laboratories, even AWWA (American Water Works Association) and expressed that they felt the immediate need to start buying and stocking up on bottled water until they get some truthful answers., and added, "what is in St. Helens drinking water and what are we doing to protect them?"

On May 3, 2008 we collected samples of the raw water at the water filtration plant (WFP) as well as the finished water, (the filtered water leaving the WFP to our consumers). The water was tested and analyzed for the 16 most common PPCP's of health concerns and risks across the United States. (A list of these chemicals, their use or definitions and the results of the analysis can be found further down on this page). Of those 16 PPCP's , only 2 were ***detected*** in the raw water (before filtration) and only 1 chemical (Atrazine) was ***detected*** in the finished water (after filtration). The level of Atrazine was actually reduced from 4 ng/l to 2.7 ng/l in the WFP process.

Atrazine is an herbicide that is used globally to block photosynthesis in broadleaf and grassy weeds in major crops. The maximum level of Atrazine allowed by USEPA in drinking water is 3 parts per billion. The detected level of Atrazine in St. Helens drinking water is 2.7 parts per trillion.



To provide a literal illustration of the amounts a part per billion and part per trillion are, here is a picture of an Olympic size pool. If you were to squeeze out a single drop of water from an eyedropper into this pool, that is one part per ***billion.*** A single drop from an eyedropper is about the size of this capital O So, 3 ***drops*** of Atrazine into this volume of water is considered a "safe" level.

Now, the comparison. A single grain of sugar is about the size of the dot over this letter ***i***.

A single grain of sugar dissolved in this pool is very, very close to being one part per trillion.

Another very important point to remember about the grain of sugar, the grain of sugar would dissolve and would be dispersed into the entire area of the pool just as the water drop became part of the entire pool.

(St. Helens water had a ***detection*** of 2.7 parts per trillion or almost 3 ***grains*** of sugar in this pool.) For St. Helens water to reach the "safe" level allowed in water, we would have to add an additional 2,997 more grains of sugar to this pool, or 3/4 teaspoon!