

2011 WATER QUALITY REPORT

In 2011 the City of Kelso maintained water quality compliance and tested for all required substances. Starting with good water quality is only a small part of the picture. The valuable distribution assets (piping, valves, hydrants, reservoirs, pumping, meters and pressure stations) and their ongoing operation and maintenance are just as vital to the community and public health. **Public works continues to meet the City Mission Goals,** many distribution water projects were completed in 2011. New water mains installed and designed, new reservoir telemetry, and construction began of a new 2 million gallon water reservoir that will be completed in 2012. **Plan, Prioritize, Construct, Operate and Maintain Public Infrastructure in Order to Provide Continuous Health and Safety While Positively Impacting Citizen's Quality of Life by Efficiently and Innovatively Maximizing Available Resources Within the City so that we Provide High Quality Services for the Public.**

was constructed in 1978. The well is located on the banks of the Cowlitz River and is determined by the Department of Health to be groundwater under the influence of surface water. This means we must treat our water to the higher surface water standards. **The City of Kelso Water Treatment Plant, starts with a high quality source water and further treats it. Our goal is to continue producing "optimal filtered water" 100% of the time.** The City of Kelso also supplies water to some Beacon Hill Water and Sewer District customers that are in the outlying parts of Kelso. In return the Regional Water Treatment Plant pumps water into the Kelso distribution system. This amounts to less than 1% of annual Kelso water usage.

Get Involved: We encourage public interest in our community's decisions affecting drinking water. Your City Council meets the first and third Tuesday of each month in the Council Chambers, located in Kelso at 203 South Pacific, meetings start at 7:00 PM. Information about your water and other departments can also be found at the City's web page. <http://www.kelso.gov>. **El informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcal o hable con alguien que lo entienda bien.**

YOUR WATER IS SAFE TO DRINK



Tips to Reduce Copper And Lead Levels that may leach from household plumbing!

"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 Kelso 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 several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>."

Use Water Wisely - Check out our web page for more water tips and our annual Water Use Efficiency Report - at "Kelso.gov"

Indoor Water Conservation Tips:

- ◆ Fix leaky plumbing fixtures, faucets and appliances in the house.
- ◆ Run only full loads in the washing machine and dishwasher.
- ◆ Install water saving devices.
- ◆ Turn the water off while shaving and brushing your teeth.

Outdoor Water Conservation Tips:

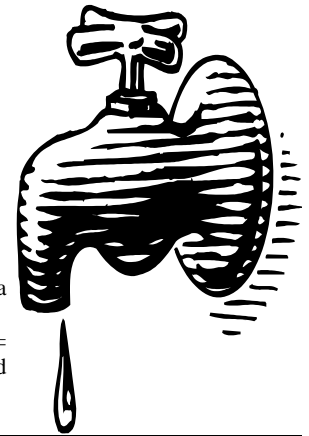
- ◆ Sweep rather than hose down, sidewalks, driveways, and other impervious surfaces.
- ◆ Add organic matter such as a compost or peat moss to your soil to improve its ability to retain water.
- ◆ Water prudently only when necessary and in the morning or late evening when temperatures are cooler.
- ◆ Mow higher, longer grass holds soil moisture better than a shorter lawn.

Treatment Plant staff prepared this report. If you have any questions about water quality or would like additional information please call us at (360-577-1085) or e-mail us at preebs@kelso.gov

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 systems 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 and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791). **The City of Kelso started a monthly cryptosporidium testing program on our untreated well water starting in January of 2008, we continued this testing until December 2009. We are pleased to report that all samples tested, have been free of *Cryptosporidium* and E-coli.**

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 water sources include microbes, pesticides, herbicides, organic or inorganic chemicals and radioactive materials. To ensure that tap water is safe to drink, EPA (Environmental Protection Agency) and/or the Washington State Board of Health prescribes regulations that limits the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and/or the Washington State Department of Agriculture regulations establish limits for contaminants in bottled water. 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) **Safe Drinking Water Hotline (800-426-4791).**

How to Read This Table: The chart in this report provides representative analytical results of water samples collected from our system. The state requires us to monitor for certain contaminants less than once per year because the concentration of these contaminants are not expected to vary significantly from year to year. Much of the data, though representative of the water quality, is more than one year old. We are required to test for many other contaminants but we only list the ones that were detected.



Terms & abbreviations used below:

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

Action Level (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For lead and copper, the AL is at the 90th percentile, thus 90% of the samples must be below the AL.

ppm= parts per million, **ppb=** parts per billion, **TT=** Treatment Technique, **NTU=** Nephelometric Turbidity Unit, **MFL=** Million Fibers per Liter, **pCi/l=** picocuries per liter (a measure of radiation), **NA=** Not applicable, **<1=** indicates the compound was not detected in the sample at or above the concentration indicated. **WTP=**Water Treatment Plant.

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level		Violation
Major Sources for these Contaminants							
Antimony	8/11/06	ppb	6	6	<1	Discharge from petroleum refineries, fire retardants, ceramics, electronics, solder.	No
Arsenic	8/11/06	ppb	10	NA	<2	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes.	No
Asbestos	7/21/10	MFL	7	7	<0.20	Decay of asbestos cement water mains, erosion of natural deposits.	No
Barium	8/11/06	ppm	2	2	<.005	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits.	No
Beryllium	8/11/06	ppb	4	4	<1	Discharge from metal refineries and coal-burning factories, discharge from electrical, aerospace and defense industries.	No
Cadmium	8/11/06	ppb	5	5	<1	Corrosion of galvanized pipes, erosion of natural deposits, discharge from metal refineries, runoff from waste batteries and paints.	No
Chlorine	2011	ppm			0.4to1.53	(Range during Coliform sampling) Water additive used to control microbes.	No
Chromium	8/11/06	ppb	100	100	<1	Discharge from steel and pulp mills, erosion of natural deposits.	No
Copper/ WTP	8/11/06	ppm	NA	NA	<0.01	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.	No
Copper/ Homes	2011	ppm	AL=1.3	NA	0.368	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.	No
Fluoride	2011	ppm	4	4	0.81	(daily average) Water additive which promotes strong teeth, Erosion of natural deposits, discharge from fertilizer and aluminum factories.	No
Lead / WTP	8/11/06	ppm	NA	0	<0.001	Corrosion of household plumbing systems, erosion of natural deposits.	No
Lead / Homes	2011	ppm	AL=.015	0	0.003	Corrosion of household plumbing systems, erosion of natural deposits.	No
Nitrate	4/4/11	ppm	10	10	0.3	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.	No
Nitrite	8/11/06	ppm	1	1	<0.2	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.	No
Beta	4/8/10	pCi/l	50	NA	1.8	Decay of natural and man-made deposits.	No
Radium 228	4/8/10	pCi/l	5	NA	0.14	Erosion of natural deposits.	No
Selenium	8/11/06	ppb	50	50	<5	Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines.	No
Sulfate	8/11/06	ppm	250	250	12.5	Natural occurring.	No
Turbidity	"continuous monitoring"				TT	Soil Runoff.	No
Thallium	8/11/06	ppb	2	.5	<1	Leaching from ore-processing sites, discharge from electronics, glass, drug factories.	No
TOC	2011Ave.	ppm	TT		0.65	Naturally present in the environment.	No
TTHMs	8/11/06	ppb	80	NA	3.8	(Chloroform & Bromodichloromethane) By-product of drinking water chlorination.	No
TTHMs	2011	ppb	80	NA	26.65	By-product of drinking water chlorination. (sampled in distribution system quarterly)	No
HAA(5)	2011	ppb	60	NA	12.10	By-product of drinking water chlorination. (sampled in distribution system quarterly)	No

****Turbidity** is a good indicator that our Ranney Well Collector and Filtration System are functioning properly. Using both turbidity and particle size counts, our filtration system has been rated by the State. **In 2011 Kelso received the Silver Certificate of Achievement by the State Department of Health for attaining the filtered water turbidity optimization goal of 0.1 ntu or less for three continuous years 2006 through 2010.**

****Chlorine** residual is monitored continuously throughout the treatment process and the distribution system is sampled daily for a free chlorine residual. During the monthly sampling for coliform bacteria, chlorine residuals are taken and the range for 2011 was .4 to 1.53ppm.

The bottom line... The City of Kelso continues to provide safe drinking water to it Customers!

