City of Junction City
Annual Drinking Water Quality Report
2005

We're very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

Why am I receiving this report?
In 1996, Congress passed amendments to the Safe Water Drinking Act that require drinking water providers to give their customers important information about their water, including where it comes from, what is in the water, and how our water quality compares with federal standards.

What if I have questions about my water?
This report describes our water quality, and explains what the various laboratory test results mean to our customers. If you have any questions about this report or concerning your water utility, please contact Larry Crowley, Mayor at 998-2153 or Jason Knope, Public Works Director at 998-3125 (email: *jknope@ci.junction-city.or.us*). We want customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on the second Tuesday of each month, at 6:30 p.m. at City Hall, 680 Greenwood, Junction City.

Where does our water come from?
Junction City, like many small cities, relies on groundwater for its domestic water supply. The City operates five wells that contribute to our drinking water supply. These wells draw from a deep aquifer. The well sites are:

Well	Aquifer	Status
13th & Elm	deep	operational year round
5th & Maple	deep	operational year round
3rd & Cedar	deep	reserve-summer use only
8th & Deal	deep	operational year round
8th & Front	deep	off line 10/2005

We have a source water protection plan available for public review at City Hall, 680 Greenwood. The Drinking Water Protection Plan was developed in 1997, and provides information such as potential sources of contamination that could affect our water supply.

What contaminants might be in water?
The City of Junction City routinely monitors for contaminants in your drinking water according to Federal and State laws. There were no detected constituents for the monitoring period of January 1 to December 31, 2005. The City monitors some 75 different constituents in your drinking water, at an annual cost of approximately $8,000. Please feel free to use the Oregon Health Divisions web site: *hhtp://www.ohd.hr.state.or.us/dwp/welcome.htm* to view our testing as well as any other water provider in the State. Our water provider ID No. is **4100418**.

- Organic compounds, including synthetic and volatile organic chemicals, are by-products of gas stations, urban storm water run-off and septic systems.
- Inorganic compounds, such as salts and metals occur naturally or are caused by urban storm run-off, mining or farming.

- Herbicides and pesticides can come from a variety of sources such as agriculture, storm water run-off and residential uses. PCB's (polychlorinated biphenyl) are chemical compounds that can be found in environmental pollution.
- Radioactive material occurs naturally or can result from oil and gas production and mining activities.

Trained City personnel check the chlorine residual levels at several locations throughout the distribution system 365 days a year. As an element of our Corrosion Control Program, weekly testing of phosphate, pH, and iron levels is also conducted. By conducting these tests we are able to determine the need to increase or decrease the level of chlorine or phosphate as necessary to maintain water quality. In addition, bacti samples are collected once a week and analyzed by an independent laboratory for Total coliform and Fecal coliform/E.coli bacteria.

How can water become contaminated?
All sources of drinking water are subject to potential contamination by substances that are naturally or man made. These substances can be microbes, inorganic and organic chemicals, and radioactive substances. All 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 the 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 1-800-426-4791.

Definitions:
In the following tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Action Level (AL) - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 - The "Goal" (MCLG) is 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.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

2005 Water Test Results – Regulated Substances Detected

Inorganic Contaminants

Contaminant	*Violation Y/N*	*Level Detected*	*Unit of Measure*	*MCLG*	*MCL*	Likely Source of Contamination
Barium	N	0.00812	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Lead	N	0.00164	ppb	0	15	Corrosion of household plumbing systems, erosion of natural deposits

Nitrate	Y	11 (8th & Front)	mg/l	0.01	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

- **Nitrates:** Nitrate in drinking water at levels above 10ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

The following substances were tested for but not detected in the city's drinking water:

Microbiological Contaminants
Fecal coliform and E.coli

Radioactive Contaminants (8th & Front Well)
Gross Alpha
Combined Uranium
Combined Radium 226/228

Disinfection By-Products (DPB) (8th & Front Well)
Total Trihalomethanes (TTHM)
Haloacetic Acids (HAA5)

Inorganic Contaminants (IOC) (8th & Front Well)

Antimony	Chromium	Nitrite (as Nitrogen)
Arsenic	Copper	Selenium
Asbestos	Cyanide	Thallium
Beryllium	Fluoride	
Cadmium	Mercury	

Synthetic Organic Contaminants including Pesticides and Herbicides - Regulated (SOC) (8th & Front Well)

2,4-D	Di(2-ethylhexyl)phthalate	Hexachlorocyclopentadiene
2,4,5-TP	Dibromochloropropane	Methoxychlor
Di(2-ethylhexyl)adipate	Dinoseb	Pentachlorophenol
Alachlor	Diquat	Picloram
Atrazine	Endothall	Polychlorinatedbiphenyls
Benzo(a)pyrene (PAH)	Ethylene Dibromide (EDB)	(PCBs)
BHC-gamma (Lindane)	Glyphosate	Simazine
Carbofuran	Heptachlor	Toxaphene
Chlordane	Heptachlor epoxide	Vydate
Dalapon	Hexachlorobenzene	

Synthetic Organic Contaminants including Pesticides and Herbicides - Unregulated (SOC) (8th & Front Well)

3-Hydroxycarbofuran	Butachlor	Metolachlor
Aldicarb	Carbaryl	Metribuzin
Aldicarb sulfone	Dieldrin	Propachlor
Aldicarb Sulfoxide	Dicamba	1,2,3-Trichloropropane
Aldrin	Methomyl	

Volatile Organic Contaminants - Regulated (VOC) (8th & Front Well)

1,1-Dichloroethylene	1,2-Dichloroethane	Benzene
1,1,1-Trichloroethane	1,2-Dichloropropane	Carbon tetrachloride
1,1,2-Trichloroethane	1,2,4-Trichlorobenzene	Cis-1,2-Dichloroethylene

Dichloromethane	p-Dichlorobenzene	Trans-1,2-Dichloroethylene
Ethylbenzene	Styrene	Trichloroethylene
Monochlorobenzene	Tetrachloroethylene	Total Xylenes
o-Dichlorobenzene	Toluene	Vinyl chloride

Volatile Organic Contaminants - Unregulated (VOC) (8th & Front Well)

1,1-Dichloroethane	Bromodichloromethane	p-Chlorotoluene
1,1-Dichloropropene	Bromoform	Dibromochloromethane
1,1,1,2-Tetrachloroethane	Bromomethane	Dibromomethane
1,1,2,2-Tetrachloroethane	Chloroethane	m-Dichlorobenzene
1,3-Dichloropropane	Chloroform	cis-1,3-Dichloropropene
2,2-Dichloropropane	Chloromethane	trans-1,3-Dichloropropene
Bromobenzene	o-Chlorotoluene	

What do these test results mean?
We constantly monitor for various constituents in the water supply to meet all regulatory requirements. On October 11, 2005 the 8th & Front well was found to have a Nitrate level that was higher than the MCL allowed by the State. The well was taken offline immediately and will remain offline until additional testing is conducted and the high Nitrate level has been resolved. Subsequent testing on October 13, 2005 showed no level of Nitrate present in the distribution system. This does not pose a threat to the quality of our water supply.

What about people with special health problems?
Some people may be more vulnerable to contaminants in drinking water than 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 and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Are there any plans to improve the water system?
As the City continues its programs to maintain a safe and dependable water supply it is necessary to make improvements in our water system. The costs of these improvements may be reflected in the rate structure. Recent maintenance efforts in this reporting period included planned improvements to upgrade the 8th & Front well. In the coming year the City will be looking at ways to resolve the elevated Nitrate level at the 8th & Front well, look at addressing the sand filtration problem at the 8th & Deal well, and look at possibly drilling a new well.

Thank You! The City of Junction City works around the clock to provide top quality water to every tap. The water system is monitored seven days a week, 365 days per year. Our Utility Workers are required to achieve Water Distribution II certification through the Oregon Health Division. Should you experience any problems with your water or, just want to ask a question, please contact us. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.