2006 Annual Report on Stayton's Drinking Water

Stayton Meets Water Quality Standards

We are very pleased to provide you with this year's annual Water Quality Report. We want to keep you informed about the excellent water the City has delivered to you over the last year. Our goal is, and always has been, to supply you with safe and dependable water. The City of Stayton draws its water from a canal that comes off of the North Santiam River. During times of high turbidity the City has two wells just north of the Santiam River that it can draw from. The 25' and 35' deep wells are capable of supplying the City with water.

The City's adopted Water Master Plan includes a water source assessment, which is available at the Public Works office.

Every year, we test the water for more than 80 different contaminants. Of the test conducted in 2006, only two contaminants were detected (see Table of Regulated Contaminant Detections on page 2).

The contaminants detected were well below the allowed limit prescribed by the Environmental Protection Agency (EPA) and the Oregon Health Division (OHD).

In 1999 we installed corrosion control measures to prevent lead from leaching out of the water system.

How To Make This Report Work For You

This report contains technical data required by the Environmental Protection Agency (EPA) and the Oregon Health Division (OHD) and as such, may seem confusing or overwhelming. To help you understand this report, please refer to the examples listed below and the definitions outlined under terms and abbreviations on page 3.

Contamination is a word used throughout this report. This is a commonly used term within the drinking water industry. The presence of the term should not necessarily invite concern. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or 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.

When measuring contaminants in drinking water, the units used to describe the quantity of contaminates found are recorded as either parts per million (ppm) or parts per billion (ppb).

To gain perspective on this measurement, imagine one billion (1,000,000,000) blue jellybeans. Now imagine that one of them is black. The amount of black jellybeans in relation to the blue ones would be 1 ppb or 1/1,000,000,000. This example works the same way with respect to ppm as well.

As you read this report, be sure to keep these figures and definitions in mind. This will assist you in interpreting what you are reading and empower you as a water customer.

Why are There Contaminants in My Drinking 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 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 (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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity. Contaminants that may be in the water include: **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations; **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, urban stormwater runoff, and residential uses; **Organic chemical contaminants**, including synthetic and volatile organic chemicals, 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. In order 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 (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Table of Regulated Contaminant Detections

Contaminant (units)	MCLG or MRDLG	MCL TT,or MRDL	Your Water	Low	High	Sample Date	Complies?	Typical Sources
Disinfectants & Disinfection By-Products (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)								
Haloacetic Acids (HAA5) (ppb)	NA	60	6.01	NA	NA	2006	YES	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	6.20	NA	NA	2006	YES	By-product of drinking water chlorination
Inorganic Contaminants								
Sodium (optional) (ppm)	NR	MCL	6.6	NA	NA	2005	YES	Erosion of natural deposits; Leaching

Table of Lead and Copper Detections

Substance	MCLG	Action Level (AL) mg/L	* 90th Percentile	Homes Exceeding AL	Complies?	Sources of Contamination
Copper	1.3	1.35	0.3200	0	Yes	Corrosion of household plumbing
Lead	0	.0155	0.0030	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 the customers' taps most likely to contain these substances based on when the house was built. The EPA determined that if the sample results exceeded the Action Level, the City must take action in reducing the risk of leaching of lead and/or copper.

In 1998/99 the City installed corrosion control measures to prevent lead from leaching into your water system. As you can see from the above table, your water was well below the action level on our last round of testing in 2006.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than that at other homes in the community as result of the materials used in your home's plumbing system. It you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the **Safe Drinking Water Hotline (800-426-4791).**

Water Quality Data Table

Maximum Contaminant Levels are set at very stringent levels. To understand the risk of the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day, at the MCL, for a lifetime to have a one-in-a-million, or 0.0001 % chance of experiencing the described health effect. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the Table of Regulated Contaminant Detections is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, may be more than a year old.

Terms and Abbreviations used in this report:

AL: Action Level; The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCLG: Maximum Contaminant Level Goal; The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MCL: Maximum Contaminant Level; The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as possible using the best available treatment technology.

MRDLG: Maximum Residual Disinfectant Level Goal; The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MRDL: Maximum Residual Disinfectant Level; The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

TURBIDITY: The measure of the cloudiness of water.

NA: Not Applicable

ND: Not Detected

NR: Not Regulated; Neither the EPA nor OHD has set an MCL for this contaminant.

NTU: Nephelometric Turbidity Units: A measure of water clarity.

ppm: Parts per million; one part per million corresponds to one minute in two years or a single penny in $10,000.

ppb: Parts per billion; one part per billion corresponds to one minute in 2,000 years or a single penny in $10,000,000.

Range: The lowest amount of a contaminant detected and the highest amount detected during a sample period

Violations

We are pleased to report that in 2006 the City's drinking water system did not violate a maximum contaminant level or any other water quality standard .

Alerts

Every year we test the water for more than 80 different contaminants and we are pleased to announce that there are no alerts to report for 2006.

Special Notes for the Immune Deficient

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/Centers for Disease Control (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.**

Become Involved

City Council meetings for Stayton are the first and third Monday of each month. Council meetings begin at 7:00 P.M. Contact Stayton City Hall at 503-769-3425 for more information.

The City's adopted Water Master Plan includes a water source assessment, which is available at the Public Works office located at 311 N. 3rd Ave, Stayton.

Contacts

The City of Stayton
Michael R. Faught
Public Works Director
503-769-2919

EPA Hotline
800-426-4791

The Department of Human Services
www.oregon.gov/DHS/ph/ophs

Oregon Health Division
503-731-4317

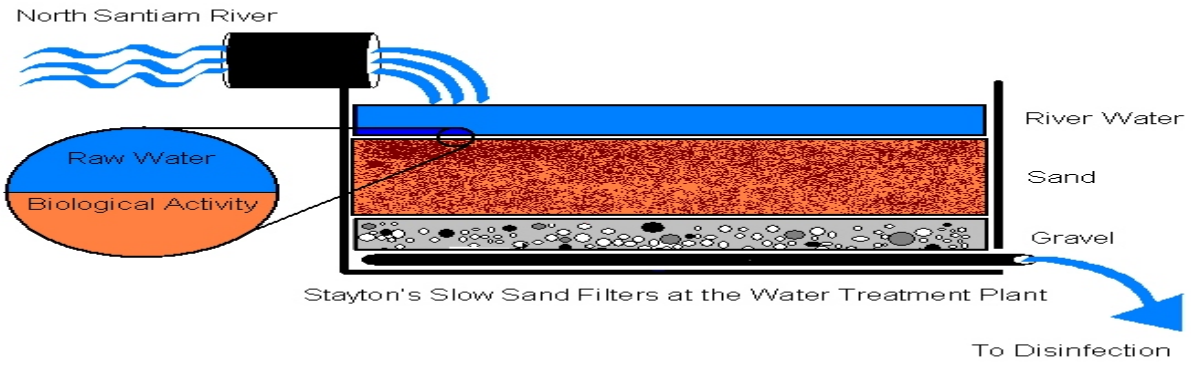
Slow Sand Filtration

Stayton's water treatment process uses slow sand filtration. Slow sand filtration uses naturally occurring biological activity to clean drinking water. Slow sand filters are a reliable system for cleaning drinking water, and have been used for centuries. Stayton's water treatment plant is located off of south 1st Avenue. Water from the North Santiam River is processed on three large slow sand filters located at the water treatment plant.

How does Slow Sand Work?

1.) Water from the North Santiam River is put on slow sand filters

2.) Algae, protozoa, and small invertebrates the live in the slow sand filter remove biological contaminants such as Cryptosporidium. The surface of the slow sand filter is where most of the contaminant removal occurs.

3.) Straining of dirt and clay particles at the surface of the filter as well as further down through the sand and gravel.

4.) After water passes through the slow sand filter, chlorine is added for disinfection, and soda ash is added for corrosion control.