

# SUB's 2016 Water Quality Report

## Dear SUB Water Customer,

SUB is pleased to provide you with this water quality report. In 2016, SUB supplied over 2.9 billion gallons of clean drinking water to more than 59,000 people. This report is a summary of 2016 test results and reflects the SUB Water Division's continuous commitment to providing you with reliable, safe, high quality drinking water, each and every day.

The majority of Springfield's water comes from aquifers and a small percentage comes from river water, which is delivered through a closed, protected system that is closely monitored. Our water undergoes rigorous testing, far beyond what is required by state and federal laws. In 2016, your water met, and in many cases exceeded, all state and federal requirements.

SUB is the ninth largest municipal water system in Oregon, with 27 wells, 1 river intake, 6 storage tanks, 9 pump stations, hundreds of miles of pipes and more than 20,000 service connections. Managing these assets means taking good care of what we have and keeping up with demands of growth. SUB does this by repairing system leaks, installing new pipelines and connecting our sources with new transmission lines.

Springfield's quality of life and economic health depend on clean, safe water. Thank you for the opportunity to serve you and our thriving community.

## Your SUB Water Division Team

### Special Notices

A Source Water Assessment that evaluates risks to groundwater and surface water has been completed as part of Springfield's Drinking Water Protection Plan. Copies may be reviewed or purchased for the cost of reproduction at the Springfield Public Library, Springfield Planning Services Division, Rainbow Water District or SUB's Water Service Center.

### For more information on water issues

Learn more about water issues by attending SUB Board meetings, volunteering to help with pollution prevention projects, or by serving on a Customer Advisory Committee. If you have questions or need more information, contact:

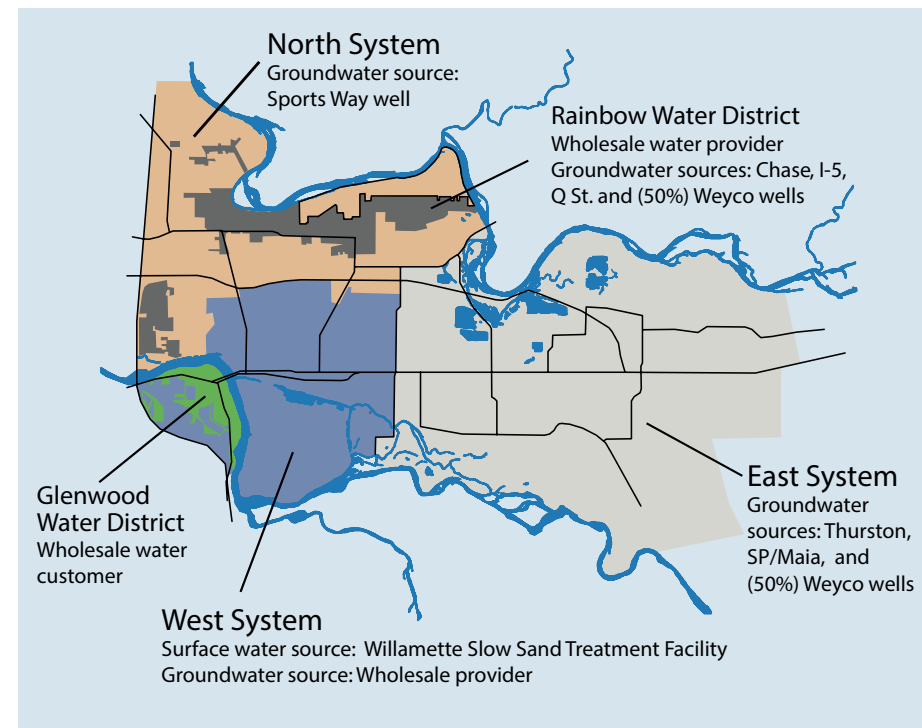
SUB Water Quality Program Manager  
(541) 726-2396

Environmental Protection Agency's Safe Drinking Water Hotline  
(800) 426-4791

Oregon Health Authority (OHA) Drinking Water Services  
(971) 673-0405

Este reporte contiene información que usted quizás desee tenerlo traducido.

## Springfield Utility Board Water Systems and Sources



## Information about SUB's water

- SUB monitors Springfield's drinking water quality around-the-clock and also provides over 8000 additional tests throughout the water system to verify that the water is clean and safe.
- Fluoride: There is no detectable fluoride in SUB's source water or drinking water.
- Hardness: The water hardness in the West System is about 35-65 ppm, the East System hardness is about 25-60 ppm, and the North System hardness is about 40-80 ppm.
- pH: The water pH in the West System is about 6.8 - 7.8 and the East Systems pH is about 7.5. The North System has a pH range of about 6.8 - 7.5.



## Health Information for SUB Customers

Drinking water (even bottled water) may contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. For more information about contaminants and the potential health effects, call the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

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 from human activity. About three quarters of Springfield's drinking water is provided by groundwater wells and the other one quarter is provided by a blend of river and well water that is filtered.

Contaminants that may be present in source water include:

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

### SPECIAL NOTICES:

To ensure safe drinking water, EPA regulates the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration establishes limits for contaminants in bottled water to provide the same protection for public health.

Some people may be more vulnerable than others to contaminants in drinking water. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons having undergone organ transplants, people with HIV/AIDS or other immune system disorders, infants and some elderly people 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 microbial contaminants are available from the Safe Drinking Water Hotline at the number listed in this report.

### CONCERNING LEAD IN YOUR HOME'S WATER:

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 Springfield Utility Board 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 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 <http://www.epa.gov/safewater/lead>.

## 2016 Springfield Utility Board Water Quality Report Data

SUB performs more than 8,000 water quality tests each year. Trained staff collects water samples from wells, storage facilities and various points in the distribution system. Many of these samples are then taken to a state-licensed laboratory for analysis, and results are reported to the Oregon Health Authority.

Below, you will find a chart that lists all the regulated items detected in water sampled as part of SUB's water quality program - even those found in insignificant amounts. These tests are required by the Oregon Health Authority Drinking Water Services. In addition to mandated tests, SUB conducts other testing to ensure the highest possible water quality.

## Water quality results

Water Tests	Unit	Federal Limit	Federal Goal	Year Tested	SUB's System (Range detected)	Year Tested	RWD's System (Range detected)	In Compliance?	Typical Source
<b>Inorganics</b>									
Arsenic	ppb	10	0	2016	(ND - 3.53)	2015	(ND - 5.0)	Yes	Erosion of natural deposits in groundwater
Barium	ppm	2	0	2013	(ND - 0.0066)	2012	ND	Yes	Erosion of natural deposits
Nitrate	ppm	10	10	2016	(ND - 1.52)	2015	(ND - 2.6)	Yes	Natural deposits, runoff from fertilizers, leaching from septic tanks, sewage
Sodium	ppm	N/A	N/A	2016	(3.74 - 11.6)	2012	(5.1 - 21.9)	Yes	Erosion of natural deposits
<b>Disinfectant</b>									
Chlorine	ppm	MRDL = 4	MRDLG = 4	2016	(0.20 - 0.77) RAA = 0.52	2016	(0.2 - 0.72) RAA = 0.48	Yes	Water additive used to control microbes
<b>Disinfection Byproducts</b>									
Haloacetic Acids	ppb	60	0	2016	(ND - 13.5) LRAA = 11.3	2016	ND	Yes	Byproduct of drinking water disinfection
Total Trihalomethanes	ppb	80	0	2016	(6.7 - 24.5) LRAA = 22.6	2016	(ND-1.94)	Yes	Byproduct of drinking water disinfection
<b>Microbiological</b>									
Total Coliform	N/A	5% of monthly samples are positive	0	2016	1 positive sample	2015	0 positive samples	Yes	Naturally present in the environment
E. Coli	N/A	monthly samples are positive	0	2016	0 positive samples	2015	0 positive samples	Yes	Human or animal fecal waste
Turbidity	NTU	TT= 5 NTU	0	2016	(0.05 - 1.4) 100%			Yes	Soil erosion from runoff
<i>Willamette slow sand treatment facility</i>		TT= percentage of samples below 1.0 NTU							
Turbidity	NTU	TT= 5 NTU	0	2016	(0.03 - 0.34) 100%			Yes	Soil erosion from runoff
<i>Thurston well #2</i>		TT= percentage of samples below 1.0 NTU							
<b>Radiological</b>									
Radium Combined	pCi/L	5	0	2016	(ND - 1.54)	2015	(ND - 1.54)	Yes	Erosion of natural deposits
<b>Lead and Copper Sampling at High Risk Residential Water Taps</b>									
Copper	ppm	AL=1.35 (AL exceeded if 10% or more homes tested above 1.35 ppm)	0	2016	0.38 (0 site over AL)	2015	0.54 (0 sites over AL)	Yes	Corrosion of household and commercial plumbing
Lead	ppb	AL=15 (AL exceeded if 10% or more homes tested above 15 ppb)	0	2016	4.1 (0 sites over AL)	2015	4 (0 sites over AL)	Yes	Corrosion of household and commercial plumbing
<b>Total Organic Carbon in Untreated Water</b>									
Willamette River and Wells	ppm	N/A	N/A	2016	(0.495 - 0.786)			Yes	Naturally present in the environment
McKenzie River	ppm	N/A	N/A	2016	(0.382 - 0.809)			Yes	Naturally present in the environment
<b>Unregulated Contaminants</b>									
Chromium (Total)	ppb	N/A	N/A	2013	0.02 (ND - 0.21)			N/A	Erosion of natural deposits
Chromium-6	ppb	N/A	N/A	2013	0.14 (ND - 0.36)			N/A	Erosion of natural deposits
Strontium	ppb	N/A	N/A	2013	59.0 (26 - 150)			N/A	Erosion of natural deposits
Vanadium	ppb	N/A	N/A	2013	2.9 (0.91 - 4.8)			N/A	Erosion of natural deposits

## A key to abbreviations and terminology used in the tables:

AL or ACTION LEVELS: Concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow.

FEDERAL LIMIT or MAXIMUM CONTAMINANT LEVEL: The highest level of a contaminant allowed in drinking water. MCLs are set by the Environmental Protection Agency to be as close to the MCLG as feasible using the best available treatment technology.

FEDERAL GOAL or MAXIMUM CONTAMINANT LEVEL GOAL: The level of a contaminant in drinking water below which there is no known or expected risk to health, as set by the Environmental Protection Agency (MCLGs allow for a margin of safety). LRAA or LOCATIONAL RUNNING ANNUAL AVERAGE: The continual running average from each previous sample site.

MRDL or 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.

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

N/A: Not applicable.  
ND: Not detected.  
NTU or NEPHELOMETRIC TURBIDITY UNITS: Units of measure for turbidity.  
pCi/L: Picocuries per liter (a measure of radio-activity)  
PPB or PARTS PER BILLION: One pound of contaminant per billion pounds of water.

PPM or PARTS PER MILLION: One pound of contaminant per million pounds of water.

RAA or RUNNING ANNUAL AVERAGE: Computed using monthly or quarterly results and is a value used for compliance.

RWD: Rainbow Water District, a wholesale water provider.

TT or TREATMENT TECHNIQUE: A required process intended to reduce the level of a contaminant in drinking water.

TURBIDITY: A measure of the cloudiness of water caused by suspended particles.  
UNREGULATED CONTAMINANTS: Contaminants that don't yet have a drinking water standard set by Environmental Protection Agency (EPA). The purpose of monitoring these is to help EPA decide whether the contaminates should have a standard.

## Additional testing information:

- The State allows us to monitor for some contaminants less than once per year because the concentration of these do not change frequently. Some of our data, though representative, are more than one year old.
- SUB routinely tests for over 120 inorganic and organic chemical contaminants at each of the utility's five drinking water source facilities and the water distribution system.
- SUB collects over 900 distribution samples annually to test for microbial contaminants. Only one of these tests was considered unsatisfactory, but all follow-up samples were satisfactory. One unsatisfactory sample is not considered a public health threat.