



Water Quality Report

2004

In 2004, the water supplied by Sunrise Water Authority met or exceeded all federal and state drinking water standards. The Staff at Sunrise Water Authority is dedicated to providing our customers with a safe and reliable supply of high-quality tap water. This annual report is intended to provide current information about your tap water.

Overview

In 2004, Sunrise Water Authority provided 1.61 billion gallons of water to approximately 38,000 people in the Sunrise Water Authority service area. Sunrise's distribution system consists of twelve pump stations, six active wells, and thirteen reservoirs with a total storage capacity of 18.7 million gallons.

Water Source

Sunrise Water Authority purchases a portion of the water that we supply from the North Clackamas County Water Commission (NCCWC), a supply agency jointly owned by Sunrise Water Authority and Oak Lodge Water District. The water supplied through this agency is treated water from the Clackamas River (surface water). Additional surface water is purchased from Clackamas River Water (CRW) and a portion is also produced from wells owned by Sunrise Water Authority (groundwater).

The NCCWC, CRW and South Fork Water Board own and operate water treatment plants that use the Clackamas River as a source for "raw" or untreated water. All of the surface water used by Sunrise is generated from these three plants. The Clackamas River watershed is a high quality source for raw water. Sunrise Water Authority takes an active role in planning for and monitoring the environmental health of the watershed.

The Clackamas River begins on the slopes of Olallie Butte, a High Cascade volcano. The river flows 82.7 miles from its headwaters (elevation 6,000 ft) to its confluence with the Willamette River near Gladstone and Oregon City (elevation 12 ft) and is made up of 16 subwatersheds.

The watershed drains more than 940 sq miles, or 600,700 acres. More than half of its length runs through forested areas over rugged terrain. The lower reaches flow through agricultural and densely populated areas.

About 72% of the watershed is publicly owned, 3% is tribally owned, and 25% is privately owned. Nearly all of the upper watershed is in the Mt. Hood National Forest and is managed by the US Forest Service. In contrast, most of the lower watershed is privately owned.

If the information provided in this report looks familiar, it should. The Environmental Protection Agency mandates much of the information and verbiage that is included in this required annual report. While much of the content is similar from year to year, the information that is provided in the water quality tables are updated annually to provide current information.

About This Report

To insure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes limits on the amount of certain contaminants in water provided by public water systems. The Oregon Department of Human Services, Drinking Water Program is charged with monitoring compliance with those limits by water providers in the state. Bottled water must meet similar standards for contaminant levels as prescribed by the Food and Drug Administration (FDA).

All drinking water, including bottled water, may be reasonably expected to contain at least 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 potential health effects call the EPA's Safe Drinking Water Hotline (800-426-4791) or visit the EPA website address:

WWW.EPA.GOV/SAFEWATER

The water that Sunrise Water Authority supplies to its customers undergoes rigorous testing and monitoring before being delivered to you. This annual water quality report, required by the Safe Drinking Water Act, is designed to provide information about the source of your water, what tests show about it, and more. The data displayed in the tables contained in this report are the results of the most recent tests performed.

When Congress passed the 1996 Safe Drinking Water Act Amendments, the Environmental Protection Agency (EPA) was given the mandate to require public water systems to provide each customer with an Annual Water Quality Report.

The sources of drinking water, both tap and bottled, include surface sources such as rivers, streams, lakes and reservoirs, and groundwater sources, or wells. As water moves through the ground or over surfaces, it dissolves naturally occurring minerals and, in some cases, radioactive material. Water can also pick up substances resulting from the presence of human or animal activity. Contaminants that may be present in the source water include:

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

A Source Water Assessment for the Clackamas River Sub-basin, between the I-205 bridge and Estacada, has been completed by the Oregon Department of Environmental Quality, with the cooperation of Clackamas River Water, the North Clackamas County Water Commission, South Fork Water Board, the Clackamas River Basin Council, and numerous other volunteers. The Assessment, prepared under guidance and requirements of the Federal Safe Drinking Water Act and the US Federal Environmental Protection Agency, is intended to help citizens and public water systems identify potential threats to river health and to promote working cooperatively to create strategies to protect the Clackamas River and its tributaries. A copy of the Assessment may be viewed at Sunrise Water Authority.

An Explanation of the Water Quality Data Tables

The tables in this report illustrate the results of our water quality analysis. Every regulated contaminant that was detected in the water, even in the most minute traces, is listed here. These results were compiled from tests conducted by certified laboratories for Sunrise Water Authority, the North Clackamas County Water Commission, Clackamas River Water District, and South Fork Water Board. Reading the definitions listed below will assist in your understanding of the Water Quality Data Tables.

- * **Maximum Residual Disinfectant Level Goal (MRDLG):** 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.
- * **Maximum Residual Disinfectant Level (MRDL):** 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.
- * **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 below 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, if exceeded, triggers treatment or other requirements that a water system must follow.
- * **Parts Per Million (ppm) or Milligrams Per Liter (mg/l):** A measure of the concentration of a substance in a given volume of water. One part per million corresponds to one penny in \$10,000.
- * **Parts Per Billion (ppb) or Micrograms Per Liter:** An even finer measure of concentration. One part per billion corresponds to one penny in \$10,000,000.
- * **Total Trihalomethanes (TTHM):** By-products of the treatment process that are formed when the disinfectant chlorine combines with organic matter in the source water. Since chlorine is important for disinfection, TTHMs will be present, but they are monitored very closely by water utilities.
- * **Haloacetic Acids (HAA):** By-products of the treatment process that are formed when the disinfectant chlorine combines with organic matter in the source water. Since chlorine is important for disinfection, HAAs will be present, but they are monitored very closely by water utilities.
- * **Picocuries Per Liter (pCi/L):** a measure of radioactivity.
- * **Nephelometric Turbidity Units (ntu):** A measure of particles in water.
- * **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

Table of Detected Contaminants at Wellheads

Contaminant	Unit	MCL	MCLG	Highest Detected Level	Range	Major Sources	Violation
Radioactive Contaminants							
Combined Radium (02)	pCi/L	5	0	1.35	0-1.35	Erosion of Natural Deposits	No
Uranium (03)	ppb	30	0	0.08	0.03-0.08	Erosion of Natural Deposits	No
Inorganic Contaminants							
Arsenic	ppb	50	N/A	5	0-5	Erosion of natural deposits; Run-off from Orchards and glass and electronics production wastes	No
Copper (02)	ppm	AL=1.3	1.3	0.009	0-0.009	Erosion of natural deposits	No
Fluoride (02)	ppm	4	4	1.8	0-1.8	Erosion of natural deposits; Discharge from fertilizer and aluminum factories	No
Nitrate (as Nitrogen)	ppm	10	10	2.4	0-2.4	Fertilizer run-off; leaching from septic tanks, sewage; Erosion of natural deposits	No

Giardia cysts and Cryptosporidium Oocysts were not detected in your treated drinking water. Both Giardia and Cryptosporidium are parasitic organisms found in the intestinal tracts of warm-blooded animals. The presence of these organisms is monitored monthly in the Clackamas River to look for increasing trends in the quantity of organisms present. Customers with compromised immune systems (I.e. HIV, Cancer treatments, elderly, and the young) are generally more susceptible to infection by these organisms. These organisms are generally seen in higher concentrations during the summer months as humans and animals frequent the river banks.

Raw Water Quality of the Clackamas River

Contaminant	Units	MCL	12 Month Average	Highest Detected Level	Range
Giardia	# cysts/L	NA	0.67	1.8 cysts/L	0.1-1.8 cysts/L
Cryptosporidium	#oocysts/L	NA	0.027	0.1 oocysts/L	0-0.1 oocysts/L

Table of Detected Contaminants at Water Treatment Plants in Treated Water

Contaminant	Unit	MCL	MCLG	Highest Detected Level	Range	Major Sources	Violation
Microbiological Contaminants							
Turbidity	ntu	TT	N/A	0.59	0.02-0.59	Soil Runoff	No
Inorganic Contaminants							
Nitrate (as Nitrogen)	ppm	10	10	0.6	0-0.6	Runoff from fertilizer use; Leaching from septic tanks, sewage, Erosion of natural deposits	No

Testing

Samples are routinely collected from numerous points in the distribution system and reservoirs and are tested. State certified operators collect the samples, which are then tested at state certified laboratories.

Chlorine

The addition of small amounts of chlorine protect our consumers from disease causing organisms . We are required by law to add disinfectant in order to meet state and federal mandates for safe drinking water.

Radon

Radon is a naturally occurring radioactive gas present in the earth that you cannot see, smell or taste. The EPA has not issued a standard for testing of radon. Sunrise Water Authority does not currently test for radon. The majority of our water supply comes from a surface water source, so radon levels are naturally low.

Cryptosporidium & Giardia

Cryptosporidium and Giardia are microscopic organisms that may cause gastrointestinal disease in some people, especially individuals with conditions that affect the immune system. Currently, there is not an established Maximum Contaminant Level for either Cryptosporidium or Giardia. However, because of the potential health effects of these organisms, both raw and treated water are tested for presence. Tests administered in 2004 did not detect Giardia and Cryptosporidium in your drinking water.

Lead

The water supplied by Sunrise Water Authority has been tested for lead content and found to be in compliance with regulations. In the Sunrise area, 62 homes were tested and only five exceeded the action level. In the Carver area, 5 homes were tested and none exceeded the action level.

Most lead contained in tap water is caused by leaching from household pipes and fixtures that were connected using solder that contained lead. If lead is of particular concern to you, you may want to have your tap water tested by an independent laboratory.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels in your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Additional information on lead in your drinking water is available from the Safe Drinking Water Hotline at:

800-426-4791

How You Can Reduce Your Exposure to Lead

Homes that are at a higher risk of lead leaching from the plumbing system and fixtures are those built between 1970 and 1985, but if you are concerned about your exposure to lead, you can reduce the risk by taking the following actions:

- Run water a minimum 30 seconds prior to use if water has been unused for more than six hours.
- Use only cold water for cooking, drinking, and making baby formula. Hot water may leach more metals from your plumbing system.
- Use only lead-free solder when making plumbing repairs.
- Use NSF certified faucets and plumbing fixtures. Contact NSF International for more information about certified faucets and plumbing fixtures. They can be reached at 877-867-3435, on the web at www.nsf.org, or by email at info@nsf.org.

Table of Detected Contaminants in the Distribution System

Contaminant	Unit	MCL	MCLG	Detected Level	Range	Major Sources	Violation
Microbial Contaminants				Highest			
Total Coliform Bacteria	—	2 positive samples / month	0	1	0-1	Naturally present in the environment	No
Inorganic Contaminants							
Copper (02)	ppm	AL=1.3	1.3	0.24 (90th Percentile)	0.008-0.49	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood	No
Lead (02)	ppb	AL=15	0	13 (90th Percentile)	0-31	Corrosion of household plumbing systems; Erosion of natural deposits.	No
Disinfection By-Products				Average			
TTHMs (Total Trihalomethanes)	ppb	80	N/A	32	25-39	By-product of drinking water disinfection	No
HAAs (Haloacetic Acids)	ppb	60	N/A	26	23-27	By-product of drinking water disinfection	No
Chlorine	ppm	MRDL=4	MRDLG=4	0.47	0.32-0.56	Water additive used to control microbes	No

Questions?

Questions concerning this report, or requests for other information should be directed to Sunrise Water Authority, 503-761-0220.

Public involvement and participation in our community's decisions affecting drinking water are encouraged. Regular monthly board meetings are scheduled for the first Tuesday of every month at 6:00 PM and the third Monday of every month, at 7:00 p.m., at 10602 SE 129th Avenue, Portland. The Public is welcome to attend.

Carver area residents began receiving water from the Sunrise system in December of 2004. The chart provided is specific to the services receiving water from the well located in Carver during the majority of 2004. That well has been disconnected from the system and in the future water quality data for Carver residents will not be shown separately.

Table of Detected Contaminants in the Carver System

Contaminant	Unit	MCL	MCLG	Highest Detected Level	Range	Major Sources	Violation
Inorganic Contaminants							
Copper (03)	ppm	AL=1.3	1.3	0.87 (90 th percentile)	0.03-0.87	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	No
Nitrate (As nitrogen)	ppm	10	10	1.0	1.0	Fertilizer runoff; Leaching from septic tanks and sewage; Erosion of natural deposits	No
Volatile Organic Contaminants							
Toluene (03)	ppm	1	1	0.0006	0.0006	Discharge from petroleum factories	No
Radioactive Contaminants							
Uranium (03)	ppb	30	0	0.096	0.096	Erosion of natural deposits	No

A Note to People with Special Health Concerns

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.