2004

Annual Consumer Confidence Report on the Quality of Tap Water

Distributed on Geiger Heights MFH, Spokane, WA

Introduction

This is an annual report on the quality of water delivered by the City of Spokane to the Geiger Heights Military Family Housing area. Under the "Consumer Confidence Reporting Rule" of the federal Safe Drinking Water Act (SDWA), community water systems are required to report this water quality information to the consuming public. Presented in this report is information on the source of our water, its constituents and the health risks associated with any contaminants.

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. Contaminants that may be present in source water include: (a) microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; (b) inorganic contaminants, 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; (c) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; (d) 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; (e) 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Spokane continually monitors the drinking water for contaminants. Your water is safe to drink; however, some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

Geiger Heights' drinking water comes from groundwater wells located throughout the City of Spokane. The wells draw water from the Spokane-Rathdrum Prairie Aquifer. The Spokane Aquifer (that portion of the larger aquifer lying within the Washington State) and the Spokane River exchange water. The rates and locations of exchange are the subject of continued study. The results of these studies will help give the City the information it needs to continue to supply high quality water to the citizens of Spokane.

Monitoring of Your Drinking Water

Your water system uses only EPA-approved laboratory methods to analyze your drinking water. Water samples are taken from the distribution system and housing residents' taps by City of Spokane personnel; samples are then shipped to an accredited laboratory where a full spectrum of water quality analyses are performed.

At Geiger Heights, Spokane monitors for the contaminant groups listed in Column 1 of the following table using EPA-approved methods. Column 2 of the table specifies the monitoring frequency for these contaminant groups.

Analyte Groups and Monitoring Frequency Table

Analyte/Contaminant Group	Monitoring Frequency
Biological contaminants (total coliform group)[1]	Once per month
Trihalomethanes[2]	Once yearly
Lead and copper	Once yearly
Inorganic contaminants (IOCs)[3]	4 quarterly samples, once every 3 years
Unregulated contaminants[4]	Once every 5 years
Radiological	Requirements to be determined, pending negotiations between Washington Dept. of Health and EPA
Volatile Organic Compounds (VOCs)[5]	4 quarterly samples, once every 3 years

1 Contaminants in this group include total coliform, fecal coliform and heterotrophic bacteria.
2 Contaminants in this group include total trihalomethanes.

3 Contaminants in this group include metals, nitrate, fluoride and asbestos.
4 Contaminants in this group include such compounds as chloroform, naphthalene, and sulfate.
5 Contaminants in this group include such compounds as benzene, carbon tetrachloride, and trichloroethylene (TCE).

Source Water Assessment

A source water assessment has been performed for the source of your drinking water (the Spokane-Rathdrum Prairie Aquifer). A source water assessment is performed to determine the quality of water before it is treated and distributed to customers. Additionally, source water assessments help us to identify ways to better protect our water source. A source water assessment performed in 1997 indicated that this aquifer is not located near any significant sources of contamination.

A copy of your source water assessment was sent to the State of Washington Department of Ecology for review. If you require further information on the quality of our source water, a copy of the source water assessment can be obtained by contacting: Mr. Lloyd Brewer, Environmental Programs Department, City of Spokane, 808 W. Spokane Falls Blvd., Spokane, WA 99201-3334.

Definitions of Key Terms

To gain a better understanding of the content of this report, several key terms must be defined. They are as follows:

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. Under the Safe Drinking Water Act, the EPA establishes these MCLs for compliance purposes.

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.

Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

Action Level (ALs)- The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum residual disinfectant level goal or 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 or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Variances and exemptions - State or EPA permission not to meet an MCL or treatment technique under certain conditions.

Please note that variances and exemptions are not the same as reduced monitoring provisions. Variances and exemptions are permissions granted by the State of Washington Department of Health (DOH) or the EPA to exceed an MCL under certain conditions. Reduced monitoring waivers are granted because our system has consistently been below MCLs for certain contaminants.

Additional Acronyms/Terms Used In This Report

Below is a listing of acronyms and terms (with explanations) used in this Consumer Confidence Report.

MCL	Maximum Contaminant Level; the highest level of a contaminant that is allowed in drinking water
MCLG	Maximum Contaminant Level Goal; the level of a contaminant in drinking water below which there is no known or expected health risk
TT	Treatment Technique; a required process intended to reduce the level of a contaminant in drinking water
AL	Action Level; the concentration of a contaminant which, if exceeded, trigger treatment or other requirements which a water system must follow
ppm	parts per million; a unit of measure equivalent to a single penny in $10,000
ppb	parts per billion; a unit of measure equivalent to a single penny in $10,000,000
ppt	parts per trillion; a unit of measure equivalent to a single penny in $10,000,000,000
ppq	parts per quadrillion; a unit of measure equivalent to a single penny in $10,000,000,000,000
mg/kg	milligrams per kilogram; a unit of measure equivalent to part per million (ppm)
µg/L	micrograms per liter; a unit of measure equivalent to part per billion (ppb)
mrem/yr	millirem per year; a measure of radioactivity in water
mg/L	milligrams per liter; a unit of measure equivalent to part per million (ppm)

MFL	million fibers per liter; a measure of asbestos in water
CCR	Consumer Confidence Report
SDWA	Safe Drinking Water Act; Federal law which sets forth drinking water regulations
pCi/L	picocuries per liter; a measure of radioactivity in water
NTU	nephelometric turbidity unit; a measure of turbidity in water
TTHMs	total trihalomethanes; byproducts of drinking water disinfection
Level Found	laboratory analytical result for a contaminant; this value is evaluated against an MCL or AL to determine compliance.
Range	the range of the highest and lowest analytical values of a reported contaminant. For example, the range of reported analytical detections for an unregulated contaminant may be 10.1 ppm (lowest value) to 13.4 ppm (highest value). EPA requires this range to be reported.
SAL	State Action Level

Results Table. Detected Contaminants

The following table presents the results of our monitoring for the reporting period of 2003.

Results Table - Detected Contaminants from Geiger Heights MFH Area

Contaminant	MCLG	MCL	Level Found	Range	Sample Date	Exceeded Standard?	Likely Source of Contaminant
Arsenic	0 ppb	10 ppb	5 ppb	4 - 5 ppb	29 Jul 03	No	Erosion from natural deposits
Nitrate (as Nitrogen)	10 ppm	10 ppm	4.78 ppm	1.43 – 4.78 ppm	29 Jul 03	No	Runoff from fertilizer use; leaching from septic tanks
Copper	1.3 ppm	AL = 1.3 ppm	90^{th} Percent-ile = 0.11 ppm	N/A	2003	No	Corrosion of household plumbing systems
Lead	0	AL = 15 ppb	90^{th} Percent-ile = 7.2 ppb	N/A	2003	No	Corrosion of household plumbing systems
Beta/photon emitters	0	50	<5 pCi/L avg.	2-5 pCi/L	2000	No	Decay of natural and man-made deposits
Alpha emitters	0	15	< 1.69 pCi/L avg.	1-3 pCi/L	2003	No	Erosion of natural deposits

The state allows Spokane to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of this data, though representative, are more than one year old.

Detected Contaminants

Spokane constantly monitors for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed also, but were not present or were below the detection limits of the lab equipment.

Radon: During 2000, the City conducted 10 tests from 8 source wells for Radon- 222. The single highest result was 450 pCi/L, the lowest was 240 pCi/L, and the mean average was 345 pCi/L.

Radon is a radioactive gas that you can't see, taste or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can also be released from tap water from showering, washing dishes, and other household activities. If you are concerned about radon in your home, you can find additional information by calling EPA's Radon Hotline (800-SOS-RADON) or accessing the EPA website at http://www.epa.gov/iaq/radon.

Compliance with the National Primary Drinking Water Regulations

The City of Spokane's water met all National Primary Drinking Water standards. EPA does not require an explanation for contaminants which are simply detected but do not exceed MCLs or treatment techniques.

Public Involvement

The Consumer Confidence Report was prepared by SSgt Walter Bennett of the 92d Aeromedical-Dental Squadron, Bioenvironmental Engineering Flight. For additional information regarding this report, please contact Bioenvironmental Engineering Flight (509) 247-2391 or City of Spokane Water & Hydroelectric Services at (509) 625-7800 and City of Spokane Environmental Programs (509) 625-6570.