SH-Exh-X–43
Docket UW 170924
Sarah Hand

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

SARAH HAND AND GRETCHEN HAND, a married couple Complainant, v. RAINIER VIEW WATER COMPANY, INC., Respondent.	DOCKET UW 170924 **SARAH HAND'S EXHIBIT 43 TO CROSS EXAMINATION**

EXHIBIT 43

TO CROSS EXAMINATION OF BOB BLACKMAN AND RACHEL STARK

July 25, 2018

2015 Rainier View Annual Water Quality Report for Southwood Water System

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Rainier View Water Company, Inc.

The Pipe Line

Southwood Water System

Water

ID No. 82844-H March, 2015 Volume 15, Issue 1

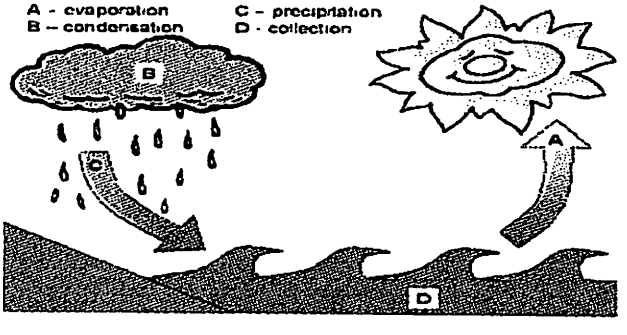
Our Water Quality Commitment: You Can Count on Rainier View Employees to...

- Provide you with the highest quality water possible
- Proper maintenance of your water system
- Customer service that is Professional and Caring.
- Consistent water treatment monitoring and testing

This 2015 Water Quality Report is your annual update on the quality and safety of your drinking water. It includes the water quality monitoring results from the most recent round of testing performed on this water system, in accordance with state and federal regulations (not all tests are required annually). The goal at RVW is to provide our customers with water quality information that allows them to become more involved and make better health based decisions.

Rainier View Water Company (RVW) is committed to being in the forefront when providing quality service together with safe potable water to its customers. RVW is proud of the product it provides and is continually looking at innovative ways to provide the best service possible.

Regarding "contaminants" in 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. In order to ensure that tap water is safe to drink, the Washington State Department of Health (WSDOH) and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and WA State Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.



Contact Information

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http://www.RainierViewWater.com

Washington State Dept. of Health
NW Drinking Water Operations
20425 72nd Ave S, Suite 310
Kent, WA 98032-2358
(253) 395-6750
http://www.doh.wa.gov/Home.aspx

NW Regional Manager:
Robert James

Terms and Abbreviations Used:

- 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.
- Maximum Residual Disinfection Level (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 (e.g. chlorine, chloramines, chlorine dioxide).
- 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.
- Action Level (AL): the concentration of a contaminant which when exceeded, triggers treatment or other requirements which a water system must follow.
- Lead and Copper 90th Percentile Value: Out of every 10 homes sampled 9 were at or below this level. This must be ≤ the AL or additional steps must be taken.

mg/L: milligrams per Liter
ppb: parts per billion.
ppm: parts per million.
ND: Non Detectable
N/A: not applicable

Where does my water come from?

Your water comes from 17 wells (groundwater) located throughout the Spanaway/Graham area. These wells vary in depth from 85 ft—700 ft with pumping capacities raging from 100—1200 gallons per minute. All active wells are chlorinated as an added health protection. To remove elevated levels of naturally occurring iron and manganese from our Silvercreek and Emerald Terrace wells, chlorine is added to oxidize and precipitate out these minerals then filtered for clarity. In addition, RVW has gone away from injecting sodium silicate to coat your plumbing and thereby preventing corrosion, to raising the Ph of the water utilizing Sodium Hydroxide. This method has reduced the amount of wells being treated from 13 down to 6.

Contaminants that may be present in source water:

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

Volatile Organic Chemicals (VOCs): Your drinking water sources were tested for 60 different VOCs in 2012. These are by-products of industrial processes and petroleum production, and can also come from gas stations and dry cleaners.

Sources of drinking water:
Common sources of drinking water, both tap and bottled water, include rivers, lakes and streams (surface water) and wells and springs (ground water). As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material. The water can also pick up substances resulting from the presence of animals or from human activity.

Source Protection Information: WSDOH has compiled Source Water Assessment Program (SWAP) data for all community water systems in Washington. SWAP data for your system is available on line at:

http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/SourceWater/Assessment.aspx

Water Quality Data

TABLE 1: Primary Contaminants Detected In Your Drinking Water

Primary Contaminant	Units	Year Tested	MCL	MCLG	YOUR WATER	Compliant (Y/N)	Major Sources in Drinking Water
Nitrate	mg/L	2014	10	10	0.9	Y	Runoff from fertilizer use, leaching from septic tanks, sewage; erosion of natural elements
Disinfectant (an additive)							
Chlorine	mg/L	2014	MRDL= 4	MRDG = 4	0.5 [a]	Y	Water additive used to kill microbes and to optimize iron and manganese removal
Disinfection Byproducts (DBPs)							
Total Trihalomethanes (TTHM) ppb		2014 [b]	80	N/A	ND	Y	Byproduct of drinking water disinfection
Microbiological					Highest No. of Monthly Positives		
Total Coliform Bacteria		2014	1	0	2 [c]	Y	Naturally present in the environment

TABLE 2: Lead and Copper Monitoring -Samples are collected at customer faucets. The number of homes sampled is based on population served by the system. Specific EPA mandated criteria are used to select the homes:

Primary Contaminant	Units	Year Tested	AL	Homes Sampled	90th Percentile Value	No. of homes Exceeding AL	Compliant (Y/N)	Major Sources in Drinking Water
Copper	mg/L	2014	1.3	40	1.0	0	Y	Corrosion of household plumbing systems; erosion of natural deposits
Lead	mg/L	2014	0.015	40	0.002	0	Y	Corrosion of household plumbing systems; erosion of natural deposits

TABLE 3: Secondary Contaminants and Unregulated Contaminants

Secondary Contaminants	Units	Year Tested	SMCL	YOUR WATER	Compliant (Y/N)	Major Sources in Drinking Water
Iron	mg/L	2013	0.1	<0.1	Y	Leaching from natural deposits; industry waste
Manganese	mg/L	2013	0.01	0.16	N	Leaching from natural deposits
Hardness	mg/L	2013	N/A	72 [d]	Y	Erosion of natural deposits
Unregulated Contaminants [e]						
Total Trihalomethanes (TTHM)	ppb	2012	N/A	ND	Y	Byproduct of drinking water disinfection

How To Read The Tables:

Your water is tested for more than 100 contaminants for which state and federal standards have been set.

Tables 1 & 2 list all primary contaminants that were detected (in *any* amount) along with their respective Maximum Contaminant Levels (MCL's). Primary standards protect public *health* by limiting the levels of these contaminants in drinking water.

Table 3 shows the levels of secondary contaminants and common water properties of interest to may consumers. Secondary contaminants have no known health effects but can affect the *aesthetic* properties of water (taste, odor and appearance). Secondary Maximum Contaminants Levels (SMCLs) are guidelines only.

[a] This is the running annual average. Range = 0.00—0.8 ppm chlorine

[b] Most recent testing done in accordance with regulations (generally every 3 years)

[c] For systems that collect >40 Coliform samples per month , the MCL is one positive (Unsatisfactory) monthly sample. One positive sample does not necessarily pose a public health threat. The Southwood water system is required to collect forty (40) routine bacteriological sample per month.

[d] Equivalent to 3.6-4.6 grains per gallon of hardness. 0-75 ppm hardness is considered "soft" water. 75-150 ppm is "moderately hard". 150-300 ppm is "hard" and >300 ppm is "very hard" water.

[e] Unregulated contaminants are those for which EPA has not established drinking water standards (note there is no MCL). The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether "future" regulation is warranted.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune compromised people such as those with cancer undergoing chemotherapy, those who have undergone 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 EPA's Safe Drinking Water Hotline at (800) 426-4791 or by visiting their web site below.

Lead in Drinking Water: In Washington state, lead in drinking water comes primarily from material and components used in household plumbing. If present, elevated levels of lead can cause serious health problems, especially in pregnant women and young children. When a drinking water tap has not been used for 6 hours or more, you can minimize the potential for lead exposure by flushing the tap until the water is noticeably colder (*30 sec to 2 min*) before using the water for drinking or cooking. Only use water from the cold water tap for drinking, cooking and especially for making baby formula, Hot water is likely to contain higher levels of lead. If you are concerned about lead in your drinking water, you may wish to have your homes water tested. Information on lead in drinking water is available from the EPA's Safe Drinking Water Hotline & web site. (See box at bottom of page)

Safe Drinking Water Hotline
1-800-426-4791
http://water.epa.gov/drink/hotline/index.cfm

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Flowing With & Providing for Our Communities