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Annual Drinking Water Quality Report Winchester Heights Water System

2016

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We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

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At Valley Water District we vigilantly safeguard and routinely monitor your drinking water. This report is a snapshot of water quality monitoring for the period of **January through December 2016**. We are proud to report that this system has not violated a maximum contaminant level or any other water quality standard.

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This system's source is a neighborhood well measuring 100 feet deep and pumping 25 gallons per minute. While the District strives to provide safe drinking water, it is important that you also take steps to protect your water supply. Valley Water District utilizes an intertie with City of Bonney Lake on this System to provide supplemental water to the District's system during times of high water demand, power outages, and during fire flow conditions. Water quality monitoring information provided to Valley Water District by City of Bonney Lake is available on the last page of this report.

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Employing water conservation strategies, taking steps to minimize the use of pesticides and fertilizers, and disposing of household chemicals properly are all ways that you can do your part to positively impact the quality of your drinking water. Please visit our office or log on to our website for great water saving tips and related information.

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Read this report at your leisure. It is designed to help you understand how we continually strive to protect water resources, improve the water treatment process, and provide you with safe, dependable drinking water.

Este informe contiene informacion muy importante sobre la calidad de su agua potable. Por favor lea este informe o comuniquese con alguien que pueda traducir la informacion.

How can I get involved?

We want our valued customers to be informed about their water utility. If you would like to learn more, please attend any regularly scheduled Board Meeting held at the District Office on the first and third Tuesday of each month, at 7:00 p.m.

If you have questions about the information in this report or any concern regarding water quality and the services we deliver every day, please contact the District office at 253-841-9698.

Sean Vance, District Manager ~ Brian Thompson, Field Supervisor ~ Email: service@valleywaterdistrict.com

Why are there contaminants in my drinking water?

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 such as the following:

Microbial Contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants, such as salts and metals, can be naturally occurring or result from urban storm-water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals are byproducts of industrial processes and petroleum production and can also come from gas stations, urban storm-water runoff, and septic systems.

Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.

Do I need to take special precautions?

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 Water Drinking Hotline at 800-426-4791.

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 (EPA) Safe Drinking Water Hotline at 1-800-426-4791.

Visit www.wateruseitwisely.com for great water saving tips!

Cross Connection Control Survey

The District encourages all customers to complete a Cross Connection Control Survey, which can be requested at the District office or found at the Forms Page of the District's website valleywaterdistrict.com. The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. The District is responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

- ◆ Boiler/ Radiant heater (water heaters not included)
 - ◆ Underground lawn sprinkler system
 - ◆ Pool or hot tub (whirlpool tubs not included)
 - ◆ Additional source(s) of water on the property
 - ◆ Decorative pond
- Watering trough

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels.

Unless otherwise noted, the data presented in this table 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 vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

2016 ~ Winchester Heights Water System ~ 2016

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
TTHMs [Total Trihalomethanes] (ppb)	NA	80	.6	NA		2016	No	By-product of drinking water disinfection
Inorganic Contaminants								
Antimony (ppb)	6	6	3	NA		2015	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Arsenic (ppb)	0	10	1	NA		2015	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.1	NA		2015	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	4	4	.3	NA		2015	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	5	5	1	NA		2015	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	100	100	7	NA		2015	No	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	200	200	10	NA		2015	No	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories
Fluoride (ppm)	4	4	.2	NA		2015	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Mercury [Inorganic] (ppb)	2	2	.2	NA		2015	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Nitrate [measured as Nitrogen] (ppm)	10	10	1.7	NA		2016	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	2	NA		2015	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (optional) (ppm)	NA		7	NA		2015	No	Erosion of natural deposits; Leaching
Thallium (ppb)	.5	2	1	NA		2015	No	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	.345	2014	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	.001	2014	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Important Drinking Water Definitions	
Term	Definition
MCLG	Maximum Contaminant Level Goal: 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.
MCL	Maximum Contaminant Level: 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.
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, triggers treatment or other requirements which a water system must follow.
Variations & Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	Maximum Residual Disinfection 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.
MRDL	Maximum Residual Disinfectant Level: 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.
MNR	Monitored Not Regulated
MPL	State Assigned Maximum Permissible Level
NTU	Nephelometric Turbidity Units: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
Unit Descriptions	
Term	Definition
ppm	parts per million, or milligrams per liter (mg/L)
ppb	parts per billion, or micrograms per liter (µg/L)
mg/l	milligrams per liter or parts per million
NA	Not Applicable
ND	Not Detected
NR	Monitoring not required; but recommended
<	Less than minimal Lab Test

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. Valley System 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 2 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Other Source Results

Valley Water District utilizes an intertie with City of Bonney Lake on the Winchester Heights Water System. This intertie provides supplemental water to the District's system during times of high water demand, power outages, and during fire flow conditions. Below is water quality monitoring information provided to Valley Water District by City of Bonney Lake regarding their water quality results for substances regulated at their treatment plant.

2016 Detected Substances					
Substance	MCL	High Level Detected	Range of Detection	Regulation Met	Potential Source
EPA Regulated					
Chlorine	4 ppm	1.20 ppm	0.30-1.20 ppm	Yes	Added disinfectant
Haloacetic Acids	60 ppb	9.5 ppb	0-9.5 ppb	Yes	Byproduct of disinfection
Nitrate	10 ppm	4.5 ppm	0.1-4.5 ppm	Yes	Septic systems; agricultural uses
Total Trihalomethanes	80 ppb	22 ppb	.9-22 ppb	Yes	Byproduct of disinfection
WA DOH Regulated					
Fluoride*	4 ppm	1.77 ppm**	0.02-1.77 ppm**	Yes	Treatment Additive
Hardness	NA	108 ppm	49-108 ppm	Yes	Erosion of natural deposits
Sodium	NA	13 ppm	7-13 ppm	Yes	Erosion of natural deposits
Turbidity	5 NTU	0.79 NTU**	0.024-0.79 NTU**	Yes**	Soil erosion; pipe sediment
Lead & Copper Monitoring Results					
Substance	Action Level	90 th Percentile	Samples Above AL	Regulation Met	
***Copper	1.3 ppm	0.95 ppm	2 of 38	Yes	
***Lead	0.015 ppm	0.003 ppm	0 of 38	Yes	

** Tacoma Sample Results *** Lead & Copper Test Results were from 2015 Required Monitoring * Tacoma Supplied Water

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.