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# Annual Drinking Water Quality Report Alderwood Water System

## 2017

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.

# W

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.

# A

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 2017.** We are proud to report that this system has not violated a maximum contaminant level or any other water quality standard.

# T

The water source for this system is a well located within Alderwood Estates. The well is 544 feet deep and can pump 145 gallons per minute. Your water is treated by disinfection which involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century. **Other Source Results:** An intertie with Tacoma Water on the Alderwood Water System is used to provide supplemental water during times of high water demand, power outages, and during fire flow conditions. The last two pages contain the water quality monitoring information provided to Valley Water District by Tacoma Water.

# E

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 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.

# R

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.

### 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](mailto: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 800-426-4791.

### 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.

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.

**2017 ~ Alderwood Estates Water System ~ 2017**

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
<b>Disinfectants &amp; Disinfection By-Products</b>								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
TTHMs [Total Trihalomethanes] (ppb)	NA	80	ND	NA		2017	No	By-product of drinking water disinfection
<b>Inorganic Contaminants</b>								
Antimony (ppb)	6	6	3	NA		2015	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Arsenic (ppb)	0	10	2	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	.2	NA		2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	1	1	.1	NA		2015	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		5	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
<b>Inorganic Contaminants</b>							
Copper - action level at consumer taps (ppm)	1.3	1.3	.06	2015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	.001	2015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

<b>Important Drinking Water Definitions</b>	
Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
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.
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.
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.
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.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
Variances & Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
<b>Unit Descriptions</b>	
Term	Definition
ppb	parts per billion, or micrograms per liter ( $\mu\text{g/L}$ )
ppm	parts per million, or milligrams per liter ( $\text{mg/L}$ )
NA	Not applicable
ND	Not detected
NR	Monitoring not required, but recommended.

**SEE NEXT PAGE FOR TACOMA WATER QUALITY RESULTS**

## 2017 Tacoma Water Quality Results

Constituent	Highest Level Allowed (MCL)	Highest Level Detected	Ideal Goals (MCLG)	Range of level Detected or # exceed AL	Regulation Met?	Potential Sources of Contaminant
<b>REGULATED AT THE GROUNDWATER SOURCES</b>						
Arsenic	10 ppb	6 ppb	0	0 - 6 ppb	Yes	Natural erosion
Barium	2 ppm	0.0044 ppm	2 ppm	0 - 0.0044 ppm	Yes	Natural erosion
Nitrate	10 ppm	4.2 ppm	10 ppm	0 – 4.2 ppm	Yes	Agricultural uses; septic
Trichloroethylene	5 ppb	.99 ppb	0	0 – .99 ppb	Yes	Industrial contamination
<b>UNREGULATED AT THE GROUNDWATER SOURCES</b>						
Chloroform	not regulated	0.69 ppb	not regulated	0 – 0.69 ppb Average 0.15	not regulated	Industrial contamination
<b>REGULATED AT THE TREATMENT PLANT</b>						
Fluoride	4 ppm	1.05 ppm	4 ppm	0.50 – 1.05 ppm	Yes	Treatment additive
Turbidity*	1 NTU	.050 NTU	not applicable	0.020 – .050 NTU	Yes	Soil erosion
<b>REGULATED IN THE DISTRIBUTION SYSTEM</b>						
Disinfection Byproducts	Highest running annual average allowed	Our running annual average	MCLG	Range of Level Detected	Regulation Met?	Potential Sources of Contaminant
Total Trihalomethane	80 ppb average	13.0 ppb average	not applicable	0 –30 ppb	Yes	Disinfection interaction
Haloacetic Acid	60 ppb average	5.9 ppb average	not applicable	0 – 9.3 ppb	Yes	Disinfection interaction
Bromate	10 ppb	0	0	0	Yes	Disinfection interaction
Chlorine Residual	4 ppm	NA	4 (MRDLG)	0.11-1.40ppm	Yes	Treatment additive
<b>REGULATED AT THE CONSUMERS TAP</b>						
Lead and Copper: Sampled last in 2016 Required every 3 years	90% of taps sampled must be below Action Level	90% of taps sampled were at or below this level	MCLG	Number of sites above the AL	Regulation Met?	Potential Sources of Contaminant
Lead	15 ppb (AL)	2.1 ppb	0	0 of 76 sites	Yes	Household plumbing
Copper	1.3ppm (AL)	0.049 ppm	1.3 ppm	0 of 76 sites	Yes	Household plumbing
Total Coliform	< 5% positive	0.000%	0	0 of 2215 samples	Yes	Sampling technique

**Definitions**

MCL- Maximum Contaminant Level: The highest level of a contaminant that allowed in drinking water. MCL's are set as close to MCLG's as feasible using the best available technology.

MCGL- Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for margin of safety.

MRL- Minimum Reporting Level, also known as the Method Reporting Limit: The smallest amount of a substance that can be reliably quantitated in sample.