

LANDLORDS

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OLD ORCHARD ESTATES
Public Water System #07748 H – Tonasket, Washington
2017 Consumer Confidence Report

This annual report is designed for consumers of drinking water within the Old Orchard Estates Water System (OOE), and provides information about the quality, source, and potential health effects of contaminants in our local and source water systems. This report conforms to the Federal regulation, contained within the Safe Drinking Water Act, which requires that this information be provided annually. This report contains a summary of the water quality test results from the OOE source water and distribution system. The data contained in this report was collected during or prior to 2016.

DEFINITIONS

The following definitions may be used in this report:

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.)*

AL – *Action Level (The level of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.)*

TT – *Treatment Technique (A required process intended to reduce the level of a contaminant in drinking water.)*

mg/L – *milligrams per liter (This unit is equivalent to measurements in parts per million.)*

ug/L – *micrograms per liter (This unit is equivalent to measurements in parts per billion.)*

pCi/L – *picoCuries per liter (A measurement of radioactivity.)*

SOURCE WATER

The source water for OOE is supplied by two wells drilled 48 and 50 feet into an underground source of water, or aquifer. The two wells together are referred to as the well field (SO3). SO3 is located on the north side of Division Street, on the same lot as the water system pump house. OOE restricts any activity that could potentially contaminate this source. The water pumped from SO3 is blended together before being delivered to your homes.

Source water tests are mandated by the Washington State Department of Health (DOH) to monitor the quality of the OOE source water. This provides information on the quality of the water that is being pumped from the aquifer. Further information about the OOE source water can be found in the source water assessment, on file with the Department of Health and Alpine Environmental. The assessment evaluates the potential risk of contamination that may be posed by activities or conditions in the area. For a copy of this information, contact Alpine Environmental at the numbers listed at the end of this report.

SOURCE WATER TESTING SUMMARY

The following tests were performed on the OOE source water in or prior to 2016. These samples were collected from a sampling tap at the well, and represent the water served from the source.

Substance Analyzed	Date Collected	Detected Level	MCL	MCLG	Unit of Measure	Passed
Inorganic Chemicals (IOC) – primary contaminants with health effects						
Nitrate	5/11/16	No Detect	10	10	mg/L	Yes
Nitrite	7/19/10	No Detect	1	1	mg/L	Yes
Arsenic	7/19/10	3.89	10	0	ug/L	Yes
Barium	7/19/10	0.05	2	2	mg/L	Yes
Cadmium	7/19/10	No Detect	5	5	ug/L	Yes
Chromium	7/19/10	No Detect	100	100	ug/L	Yes
Mercury	7/19/10	No Detect	2	2	ug/L	Yes
Selenium	7/19/10	No Detect	50	50	ug/L	Yes
Beryllium	7/19/10	No Detect	4	4	ug/L	Yes
Nickel	7/19/10	1.13	100	100	ug/L	Yes
Antimony	7/19/10	No Detect	6	6	ug/L	Yes
Thallium	7/19/10	No Detect	2	0.5	ug/L	Yes
Cyanide	7/19/10	No Detect	200	200	ug/L	Yes
Fluoride	7/19/10	0.36	4	4	mg/L	Yes
Inorganic Chemicals (IOC) – secondary contaminants with taste, odor, color effects						
Iron	7/19/10	938	300	N/A	ug/L	Yes
Manganese	7/19/10	111	50	N/A	ug/L	Yes
Silver	7/19/10	No Detect	100	N/A	ug/L	Yes
Chloride	7/19/10	17.4	250	N/A	mg/L	Yes
Sulfate	7/19/10	63.2	250	N/A	mg/L	Yes
Zinc	7/19/10	0.02	5	N/A	mg/L	Yes
Hardness	7/19/10	284	N/A	N/A	mg/L	Yes
Volatile Organic Chemicals (VOC) – includes petroleum products and other chemicals						
All VOCs (62 contaminants tested)	9/7/14	No Detect	Varies	Varies	--	Yes
Synthetic Organic Chemicals (SOC) – includes pesticides and herbicides						
All SOCs (84 contaminants tested)	9/22/08	No Detect	Varies	Varies	--	Yes

Radioactivity						
Radium	8/17/09	0.40	5	0	pCi/L	Yes
Gross alpha particles	8/17/09	3.12	15	0	pCi/L	Yes

WHAT DOES “NO DETECT” MEAN?

Many of the contaminants listed in the results tables show an analytical result of “No Detect.” This does not mean that the contaminant was not present in the water, but that the concentration, if any, was undetectable with the analytical methods used.

DELIVERED WATER

OOE is required to test for contaminants throughout the distribution system. Samples are collected from at least three residences throughout the system to satisfy the DOH sampling recommendations and to best represent the conditions existing in the system. At least one water sample per month is analyzed for the presence of coliform bacteria. In 2016, coliform bacteria

were **not detected** in any of the samples collected from the system.

Lead and copper testing is required every three years, with samples collected from homes throughout the system after the water has stood in the pipes for at least six hours. The table below summarizes the most recent lead and copper sampling results.

Substance Analyzed	Dates Collected	Contaminant Level	AL	MCLG	Unit of Measure	Passed
Lead (lot 13)	9/8/14	No Detect	15	0	ug/L	Yes
Lead (lot 23)	9/8/14	No Detect	15	0	ug/L	Yes
Lead (lot 26)	9/10/14	No Detect	15	0	ug/L	Yes
Lead (lot 29)	9/8/14	No Detect	15	0	ug/L	Yes
Lead (lot 30)	9/8/14	No Detect	15	0	ug/L	Yes
Copper (lot 13)	9/8/14	0.001	1.3	1.3	mg/L	Yes
Copper (lot 23)	9/8/14	0.002	1.3	1.3	mg/L	Yes
Copper (lot 26)	9/10/14	0.010	1.3	1.3	mg/L	Yes
Copper (lot 29)	9/8/14	0.050	1.3	1.3	mg/L	Yes
Copper (lot 30)	9/8/14	0.004	1.3	1.3	mg/L	Yes

Some contaminants can have serious health implications if they are ingested in high quantities or over long periods of time. The table below provides information on those contaminants with potential health effects that were detected in your drinking water during or prior to 2016. While these contaminants were detected, they were at levels below the allowable limits set by the state, and therefore should not pose a health risk to

most individuals. Your doctor can provide more information about any special concerns you may have regarding your drinking water and its effects on your health.

Contaminant	Known or likely source	Potential health effects
Arsenic	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Barium	Erosion of natural deposits; discharge from metal refineries; discharge of drilling wastes	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Fluoride	Erosion of natural deposits; discharge from fertilizer and aluminum factories; water additive which promotes strong teeth	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Gross alpha particles	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Nitrate/Nitrite	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Radium	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Copper	Erosion of natural deposits	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

CROSS-CONNECTION CONTROL

A cross-connection is any connection between your potable water system and a non-potable water source, chemical, or other contamination source. In our use of drinking water we create cross-connections every day, often without even realizing it.

Cross-connections are the single-most frequent sources of contamination for a water system, and it can be very costly to restore a system's integrity when contamination has occurred. Even more of a concern is the possibility that illness or even death could result from the consumption of water that has been contaminated through a cross-

connection. For this reason, it is vital to ensure that cross-connections are eliminated or isolated whenever they are identified.

WATER USE EFFICIENCY

In October, 2013, OOE established a water conservation goal, to reduce household use by seven gallons per day by 2018. By practicing water conservation measures and observing the service meter readings, we will be able to gauge our progress toward the goal.

The following chart summarizes the recorded water production for the last five years.

Year	Total Gal's (Millions)	Gal/Day Per Home	Change in GPD
2012	1.59	132	-58
2013	1.56	129	-3
2014	1.24	103	-26
2015	1.29	107	+4
2016	1.09	90	-17

The total water production for OOE dropped seventeen gallons per residence per day in 2016. On average, homes used only 90 gallons of water per day over the past year. Since the conservation goal was adopted, residential use has dropped 39 gallons per day, far exceeding the goal of a seven gallons per day reduction.

A typical family residence only uses about 100-350 gallons per day, so current water use has fallen below this range. It appears that the use of meters and a tiered rate structure has been

effective in reducing overall water consumption. OOE continues to show an excellent overall record in water conservation.

Quick identification and repair of leaks will go a long ways toward maintaining this level of consumption. Other actions that you can take include shutting off water if it isn't needed, installing low-flow fixtures, and ensuring that outdoor watering is done from the irrigation system.

COMMUNITY INVOLVEMENT

Your involvement in the management of the OOE water system is important to its long-term function. To participate or provide input, contact Dave Caddy, President at (509) 486-2342 or Miriam Caddy, Secretary/Treasurer at (509) 429-7188.

This Consumer Confidence Report has been prepared by Alpine Environmental of Tonasket, Washington, serving north central Washington water systems since 2003. As your contract water operator, Alpine Environmental is proud to be providing you with the highest quality of service and oversight available. If you have any questions or comments regarding the information presented in this report, please call Alpine Environmental at (509) 826-1653 or (509) 322-0581.

A MESSAGE FROM THE EPA

Throughout Washington State, 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. At the same time, this water can also pick up substances resulting from the presence of animals or from human activity.

All sources of 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 (EPA) Safe Drinking Water Hotline at 1-800-426-4791. Contaminants that may be present in source water, and that are routinely tested for, include:

MICROBIAL CONTAMINANTS such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

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

PESTICIDES AND HERBICIDES, which may come from a variety of sources such as agricultural and residential uses.

RADIOACTIVE CONTAMINANTS, which are naturally-occurring.

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 storm water runoff, and septic systems.

In order to ensure that our water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in the water provided by your water system. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Washington State allows some contaminants to be monitored less than once per year because the concentration of these contaminants is not expected to vary significantly from year to year.

Additional Information

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. The EPA and the Center for Disease Control (CDC) provides guidelines on appropriate methods to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants, and this information is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.

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. Old Orchard Estates water 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 thirty seconds to two minutes before using drinking 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 or at <http://www.epa.gov/safewater/lead>.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue-baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.