CITY OF PENDLETON
2012 Water Quality Report

City of Pendleton Water Department is pleased to provide you with this summary of 2012 drinking water quality information. We want to keep you informed about the water and services we have delivered to you over the past year. Our goal is and always has been, to provide you a safe and dependable supply of drinking water. There are two sources of drinking water for the City. The first source consists of 7 deep basalt wells located throughout the city and another deep basalt well located 6 miles east of the city near Mission. The second source is the Umatilla River. Beginning in December, 2003, the City began withdrawing water from the Umatilla River and filtering it through the new membrane filtration Water Treatment Plant.

We are pleased to report that our drinking water is safe and meets federal and state requirements. This report shows the City's water quality as delivered to you in 2012.

HEALTH INFORMATION

The Water Department routinely monitors for constituents in your drinking water according to federal and state laws. Chlorine is added to the water for disinfection purposes and to assist with meeting federal and state requirements. The tables included in this report show the results of our monitoring for the period of January 1st to December 31st, 2012, or, in some cases, the results of the most recent sampling completed in accordance with state and federal regulations.

All 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline (800-426-4791).

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/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 (800-426-4791).

EXPLANATION OF EXPECTED 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 City of Pendleton source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from septic systems, livestock, or wild animals.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, mining or farming activities.
- Pesticides and herbicides, which may come from a variety of sources such as farming, home or business use, or urban stormwater runoff.
- 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.
- Radioactive contaminants, which can occur naturally.

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. Maximum Contaminant Levels (MCLs) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters (approximately 2 quarts) of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

DEFINITIONS

In this report you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

Not Available (NA) - some values are not available at this time.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present at the detection level.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (µg/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l)- one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" is 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 "Goal" is 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 Disinfectant Level (MRDL) - the highest level of disinfectant allowed in drinking water.

Maximum Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health.

RESULTS OF MONITORING FOR REGULATED CONTAMINANTS

The items listed below were the only contaminants detected in Pendleton's water during the most recent monitoring period.

Parameter	Highest for Compliance	Range of Level Detected		MCL (highest level allowed)	MCLG (ideal goal)	Complies? (Is it OK?)	Potential Sources of Contaminant
		Minimum	Maximum				
Turbidity	0.11 NTU	0.05 NTU	0.11 NTU	5.0 NTU	NA	YES	Soil runoff, algae
Inorganics:							
Arsenic	1.87 ppb	ND	1.87 ppb	10 ppb	0	YES	Erosion of natural deposits
Barium	0.02 ppm	0.01 ppm	0.02 ppm	2 ppm	2 ppm	YES	Erosion of natural deposits
Fluoride	0.6 ppm	0.2 ppm	0.6 ppm	4 ppm	4 ppm	YES	Erosion of natural deposits
Nitrate	4.03 ppm	ND	4.03 ppm	10 ppm	10 ppm	YES	Erosion of natural deposits; animal waste; fertilizer; sewage; septic tanks
Selenium	3.09 ppb	ND	3.09 ppb	50 ppb	50 ppb	YES	Erosion of natural deposits
Disinfection Byproducts:							
Total TrihaloMethanes (TTHMs)	24.3 ppb	1.6 ppb	24.6 ppb	80 ppb	0	YES	By-product of drinking water chlorination
Halo Acetic Acids (HAAs)	10.7 ppb	ND	14.8 ppb	60 ppb	0	YES	By-product of drinking water chlorination
Radionuclides:							
Gross Alpha	3.76 pCi/L†	ND	3.76 pCi/L†	15 pCi/L	0	YES	Erosion of natural deposits
Combined Radium 226/228	ND	ND	ND	5 pCi/L	0	YES	Erosion of natural deposits
Combined Uranium	4.51 ppb†	ND	4.51 ppb†	30 ppb	0	YES	Erosion of natural deposits
†Results from 2009 sampling. Results of all radionuclide samples collected in 2012 were ND.							
Disinfection Residuals:		**Minimum**	**Maximum**	**MRDL**	**MRDLG**	**Complies? (Is it OK?)**	**Potential Sources of Contaminant**
Chlorine Residual @ First User		0.22 ppm	0.80 ppm	4.0 ppm	4 ppm	YES	Water additive to control microbes

RESULTS of MONITORING FOR LEAD & COPPER at RESIDENTIAL WATER TAPS

Parameter	90th Percentile Values	No. of Sites Exceeding Action Level	Action Level (AL)	MCLG	Complies? (Is it OK?)	Potential Sources of Contaminant
Lead *	2.14 ppb	1	15 ppb	0	YES	Corrosion of household plumbing; erosion of natural deposits
Copper *	0.14 ppm	0	1.3 ppm	1	YES	

*Results from 2011 sampling.

ADDITIONAL WATER QUALITY & SUPPLY INFORMATION

Water Treatment Plant

Water is withdrawn from the Umatilla River and treated at the City's membrane filtration Water Treatment Plant (WTP). The City's WTP produces high quality drinking water for Pendleton. During the 2012 water year, the WTP provided 90% of the total water used by the City. The remaining 10% came from native groundwater. Prior to 2003, the City derived 62% of its supply from native groundwater and about 38% from the City's old "Springs" source. Since the WTP was built, the City has been able to reverse this trend and now relies primarily on surface water, thus reducing declines in the groundwater aquifer. In fact, we have "banked" or not used over five billion gallons of native groundwater since the ASR project began.

Aquifer Storage and Recovery (ASR)

The City continues to store high-quality drinking water produced in its membrane filtration WTP in the basalt aquifer system beneath the City. That water is stored during the winter months when there is adequate water in the Umatilla River. The stored water is recovered during the summer months when demand is high. The process is referred to as Aquifer Storage and Recovery (ASR).

The nine years of the ASR project have demonstrated aquifer recharge, storage and recovery as a viable method for Pendleton to store and recover treated water and assist with reducing native groundwater declines.
During the 2012 water year, the City recharged and stored a record 547 million gallons in the underground aquifer. That is approximately 43% of the City's annual water supply, so the ASR program provided water for 157 days in 2012!!

City has completed the state and federal permitting process and has added two additional wells to the ASR program, bringing the total to five ASR wells which will be used for ASR in 2013.

WANT MORE INFORMATION? We want our valued customers to be informed about their water quality. If you have any questions about this report or the City of Pendleton Water Division, please contact the Regulatory Specialist at 541-966-0249. For information on water quality and water conservation measures that can save you money, visit the City's website at www.pendleton.or.us and, using the SEARCH feature, type in "Water Conservation."

Regulated Contaminant Monitoring

The contaminants listed in the table are the only contaminants detected in Pendleton's water during the most recent monitoring period. Monitoring was completed in 2009, 2011, & 2012. **Not listed in the table were 21 volatile organic compounds, 29 synthetic organic compounds, and 7 inorganic compounds, for which we tested that were NOT detected.**

Microbiological Contaminants

Microbiological testing of water helps protect the public from diseases. Chlorine is added to drinking water as a disinfectant to destroy or inactivate bacteria, viruses, and protozoa. City of Pendleton drinking water is routinely sampled for both total coliform Bacteria and *E. Coli* Bacteria. Total coliform bacteria are naturally present in the environment, and their presence is an indicator that other, potentially harmful bacteria may be present. The presence of *E. Coli* bacteria indicates that water may be contaminated with human or animal wastes. There were 290 routine microbiological samples taken throughout the distribution system in 2012. Eight samples in 2012 detected total coliform bacteria, but repeat samples at those locations showed no contamination present. **No *E. Coli* bacteria were detected.** Four of the total coliform detections occurred in March, 2012, so City notified customers of the results. City also boosted chlorination for a brief period and thoroughly flushed the system, which solved the problem.

Lead

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. City of Pendleton 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 (800-426-4791) or at http://www.epa.gov/safewater/lead.

CREATING A LASTING IMPRESSION
REACHING OUT TO YOU, OUR CUSTOMERS

The City continues to move forward with several important projects related to the water and wastewater treatment plants that serve you, our customers, and we want you to know.

WASTEWATER TREATMENT PLANT UPGRADE

The City recently completed $19 Million in upgrades at the Wastewater Treatment Plant. The plant was last upgraded in the 1970s, so not only was much of the equipment outdated, but new water quality standards required a higher level of treatment.

The plant is now a state-of-the-art facility, featuring secondary treatment utilizing the modified Ludzack-Ettinger (MLE) method, membranes from the water treatment plant, a membrane bioreactor, a biofuels generator, a sludge dewatering press, and de-chlorination facilities.

We want to invite you, our customers, to join us for a tour of the new facility on Thursday, April 25, from 5:00 – 7:00 PM. The facility is located at 4255 SW 28th Drive. Hot dogs and hamburgers will be served, so bring the family for an educational outing.

WATER TREATMENT PLANT

It's hard to believe, but the City's Water Treatment Plant will be ten years old June, 2013. This facility not only allows the City to meet current and future drinking water standards, but it also allows us to store high quality water in the underground aquifer through Aquifer Storage and Recovery (ASR), which, in turn, allows us to make power at the ASR wells.

The City currently has five ASR wells which allow us to store excess water in the underground aquifer and generate power while doing so through the Energy Recovery Technology (ERT) Project. Initial estimates indicate the ERT will produce approximately 550 megawatt hours (MWh) of power annually, saving over $36,000 in electricity costs during 2013.

The City is planning a ten-year celebration for this facility in June, 2013, so look for an announcement of the date and time, and join us for a tour of this facility.

OUREACH TO SCHOOLS

Working with the Umatilla Basin Watershed Council (UBWC), the City has made available tours of our water and wastewater facilities for schools throughout the basin.

Thanks to grant funding obtained by UBWC and implemented through their Adventure Days Program by an Oregon RARE member, students from Umatilla High School, Nixyaawii High School, Helix High School, and Echo High School have taken advantage of these tours. Sunridge Middle School students and the Civil Engineering Technology program at BMCC have also toured the facilities.

This has allowed the City to show off the facilities as well as encourage students to learn about careers in science, technology, engineering, and water and wastewater treatment.

Pay your utility bill without writing a check or buying stamps!! The automatic payment plan is a convenient way to pay your utility bill. This is a no fee service. You can pick up a form from the Finance Department at City Hall or go online at **www.pendleton.or.us** to print a form and mail it in.

PLEASE DON'T FLUSH DISPOSABLE WIPES OR DIAPERS. THEY PLUG SEWER LINES AND RESULT IN COSTLY REPAIRS!!