

# CITY OF PENDLETON

## 2005 Water Quality Report

City of Pendleton Water Department is pleased to provide you with this summary of 2005 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 2005.

### **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 1<sup>st</sup> to December 31<sup>st</sup>, 2005, 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				
<b>Turbidity</b>	1.00 NTU	0.02 NTU	1.00 NTU	5.0 NTU	NA	YES	Soil runoff, algae
<b>Inorganics:</b>							
Arsenic	1.8 ppb	ND	1.8 ppb	10 ppb	0	YES	Erosion of natural deposits
Barium	0.02 ppm	ND	0.02 ppm	2 ppm	2 ppm	YES	Erosion of natural deposits
Fluoride	0.5 ppm	0.2 ppm	0.5 ppm	4 ppm	4 ppm	YES	Erosion of natural deposits
Nitrate	3.3 ppm	ND	3.3 ppm	10 ppm	10 ppm	YES	Erosion of natural deposits; animal waste; fertilizer; sewage; septic tanks
<b>Radionuclides:</b> (last sampled in 2003)							
Gross Alpha	1.77 pCi/L	ND	1.77 pCi/L	15 pCi/L	0	YES	Erosion of natural deposits
Combined Radium 226/228	1.41 pCi/L	ND	1.41 pCi/L	5 pCi/L	0	YES	Erosion of natural deposits
Combined Uranium	1.85 pCi/L	ND	1.85 pCi/L	30 pCi/L	0	YES	Erosion of natural deposits
Gross Beta	4.32 pCi/L	ND	4.32 pCi/L	50 pCi/L	0	YES	Erosion of natural deposits
<b>Disinfection Byproducts:</b>							
Total Trihalo-Methanes (TTHM)	29.5 ppb	8 ppb	51.4 ppb	80 ppb	0	YES	By-product of drinking water chlorination
Haloacetic Acid (HAA)	22.9 ppb	4.3 ppb	47 ppb	60 ppb	0	YES	By-product of drinking water chlorination
<b>Disinfection Residuals:</b>							
	<b>Mean</b>	<b>Minimum</b>	<b>Maximum</b>	<b>MRDL</b>	<b>MRDLG</b>	<b>Complies? (Is it OK?)</b>	<b>Potential Sources of Contaminant</b>
Chlorine	0.33 ppm	0.26 ppm	0.43 ppm.	4.0 ppm	4 ppm	YES	Water additive to control microbes

## RESULTS of MONITORING FOR LEAD & COPPER at RESIDENTIAL WATER TAPS

Parameter	90 <sup>th</sup> Percentile Values	No. of Sites Exceeding Action Level	Action Level (AL)	MCLG	Complies? (Is it OK?)	Potential Sources of Contaminant
Lead *	2 ppb	1	15 ppb	0	YES	Corrosion of household plumbing; erosion of natural deposits
Copper *	0.10 ppm	0	1.3 ppm	1	YES	

\*Thirty-one sites were sampled for lead and copper in 2005. Maximum lead level measured was 52 ppb; maximum copper level measured was 0.27 ppm. The one site with high lead and copper values was re-sampled. The new lead level was 4 ppb; the new copper level was 0.14 ppm.

# ADDITIONAL WATER QUALITY & SUPPLY INFORMATION

## 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 Fecal Coliform 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 fecal coliform bacteria indicates that water may be contaminated with human or animal wastes. There were 180 routine microbiological samples taken throughout the distribution system in 2005, and none of the samples indicated the presence of either total or fecal coliform bacteria.

## 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 2003, 2004, and 2005. **Not listed in the table were 13 inorganic compounds, 21 volatile organic compounds, and 29 synthetic organic compounds for which we tested that were NOT detected.**

## Aquifer Storage and Recovery (ASR)

The City continues to store high-quality drinking water produced in its membrane filtration water treatment plant (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 first two 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. Despite the fact that 2005 was one of the driest water years of record, the ASR project recharged, stored and recovered 236 million gallons of water. In 2006, the ASR project has stored over 450 million gallons to date, which will be recovered in summer, 2006.

The membrane filtration WTP supplied a total of 914 million gallons of water to the City during the 2005 water year. Of the City's overall water supply for the 2005 water year, about 58% was treated surface water and about 42% was native groundwater.

Water Treatment Plant Water Tank



## WANT MORE INFORMATION?

If you have any questions about this report or the City of Pendleton Water Department, please contact Karen King at Pendleton Public Works, 541-966-0249. We want our valued customers to be informed about their water utility. For information on water conservation measures that can save water and save you money, visit the City's website at <http://www.pendleton.or.us> and look under Public Notices for *Water Efficiency Facts and Tips* or contact Karen King at 541-966-0249.