



Northwestern Water & Sewer District

2013 Water Quality Report

Oregon Master Meter Area

Together, the City of Oregon and the Northwestern Water and Sewer District has prepared the following report to provide information to you, the consumer, on the quality of our drinking water.

The District will notify you immediately if there is any reason for concern about the water.

We have a current, unconditional license to operate our water system.

Source of the District's Water

The City of Oregon uses surface water drawn from an intake located in Lake Erie near Reno Beach into the Low Pressure Pumping Station. The raw water is then transported to the Water Treatment Plant through 5 miles of 36-inch diameter pipe. The plant is being expanded to treat 16 million gallons of water per day (667,000 gallons per hour).

Continual monitoring of the chemical feeders and raw water by the plant's operators insures optimal treatment of the water. Lime and caustic soda for softening, alum for coagulation, carbon dioxide for neutralizing excess lime in solution and chlorine for disinfection are the primary

parts of treatment. The water is filtered through 8 rapid sand filters, then stored in 2 underground clear water reservoirs with a combined capacity of 7.5 million gallons.

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 Safe Drinking Water Hotline at 1-800-426-4791.**

The source of drinking water and bottled water includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive materials, and can pick up substances from the presence of animals or human activity.

Contaminants

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. At risk individuals 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 microbiological contaminants are available from the **Safe Drinking Water Hotline (800-426-4791).**

Contaminants that may be present in source water include:

A). *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

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

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

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

E). *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Nitrates in drinking water at levels above 10 ppm are 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 advice from your health care provider.

Some people who drink water containing **Trihalomethanes** in excess of the MCL over many years may experience

problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Lead in Drinking Water

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. The District 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 tap 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, test methods and steps you can take to minimize exposure is available from the **Safe Drinking Water Hotline (1-800-426-4791)**, <http://www.epa.gov/safewater/lead>.

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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. It's important to remember that the presence of certain contaminants does not necessarily indicate that the water poses a health risk.

Source Water Assessment

The District buys water from the City of Oregon. The City of Oregon Public Water System uses surface water drawn from an

intake located in Lake Erie near Reno Beach. For the purposes of source water assessments, all surface waters in Ohio are considered to be susceptible to contamination. By their nature, surface waters are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel times from source to intake.

Although the water system's main intake is located offshore in Lake Erie, the proximity of several onshore sources increases the susceptibility of the source water to contamination. The City of Oregon Public Water System's drinking water source protection area is susceptible to contamination from industrial wastewater, combined sewer or sewage treatment plant overflows, home sewage disposal system discharges, open water dredge disposal operations, runoff from agricultural and urban areas, oil and gas production and mining operations, and accidental releases and spills, especially from commercial shipping operations and recreational boating.

The City of Oregon Public Water system treats the water to meet drinking water quality standards, but no single treatment protocol can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie. More detailed information is provided by the City of Oregon Public Water System's Drinking Water Source Assessment report, which can be obtained by contacting Doug Wagner, Superintendent of Water at 419-698-7123

Minimizing Peak Daily Flow Rates

Even with the City of Oregon's plant expansion, conservation is still important. Housing developments in Oregon and the satellite systems, along with added industrial usage has pushed the peak water consumption days past 150% of the original plant's capacity. The expansion to 16 million gallons per day (MGD) that went online in November 2004 has already supplied some 12 MGD plus peak days.

You can help. Please contact the District for water and money saving tips you can use both inside and outside your home.



City of Oregon Water Treatment Plant

ADMINISTRATION, CUSTOMER SERVICE AND OPERATIONS:

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The following table shows the results of our water-quality analysis. Every regulated contaminant that we detected in the water, even in the most minute traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual source of such contaminants, and a key to the units of measurement. This table does not show the numerous other contaminants we tested for, and did not detect in our water.

2013 Water Quality Data - Oregon Master Meter Area							
CITY OF OREGON DATA							
Contaminant (Units)	Violation Y/N	Sample Year	MCL	Detected Level	Range of Detections	MCLG	Likely Source of Contamination
Microbiological Contaminants							
Turbidity (NTU)	No	2013	TT=0.3	0.09	.04– 0.09	NA	Soil runoff
Turbidity (% samples meeting standards)	No	2013	TT	100%	100 %	NA	
Total Organic Carbon (TOC)	No	2013	TT	2.0	1.1 - 2.4	NA	Naturally present in the Environment
Inorganic Contaminants							
Chlorite (ppm)	No	2013	2	0.80	0.032 - 0.08	2	Discharges from metal refineries, & of drilling wastes; Erosion of natural deposits
Fluoride (ppm)	No	2013	4	1.20	0.53 - 1.20	4	Water additive which promotes strong teeth; Erosion of natural deposits
Nitrate (ppm) (as Nitrogen)	No	2013	10	4.94	ND - 4.94	10	Runoff from fertilizer use; sewage; erosion of natural deposits
Barium (ppm)	No	2013	2	0.077	0.077 - 0.077	2	Discharge from metal refineries and of drilling wastes; erosion of natural deposits
Inorganic Contaminants							
Simazine (ppb)	No	2013	4	0.054	ND - 0.054	4	Run off from herbicide used on row crops.
Atrazine (ppb)	No	2013	3	0.94	ND - 0.94	3	Run off from herbicide used on row crops.
NORTHWESTERN WATER AND SEWER DISTRICT DATA							
Inorganic Contaminants							
Contaminant (Units)	Violation Y/N	Sample Year	Action Level	90th Percentile	# of Samples Over AL	MCLG	Likely Source of Contamination
Copper (ppm)	No	2013	1.3	0.025	0 sites over action level	1.3	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead (ppb)	No	2013	15	0	0 sites over action level	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Volatile Organic Contaminants							
Contaminant (Units)	Violation Y/N	Sample Year	MCL	Highest LRAA	Range of Levels Detected	MCLG	Likely Source of Contamination
Total Trihalomethanes - TTHM (ppb)	Yes	2013	80	86	54.6 - 136	No goal for the total	By-product of drinking water disinfection
Haloacetic Acids(HAA5) (ppb)	No	2013	60	18	13.6 - 27.7	No goal for the total	By-product of drinking water disinfection
Residual Disinfectants							
Contaminant (Units)	Violation Y/N	Sample Year	MCL	Highest Level Detected	Range of Levels Detected	MCLG	Likely Source of Contamination
Total Chlorine (ppm)	No	2013	MRDL 4.0	.07	.07 - 1.34	MRDLG 4.0	Water additive used to control microbes
Data presented is from the most recent monitoring done in compliance with regulations.							
Key To Table				< = A symbol that means less than or equal to.			
AL=Action Level				ppm = parts per million, or milligrams per liter			
MCL= Maximum Contaminant Level				ppb = parts per billion, or micrograms per liter			
MCLG= Maximum Contaminant Level Goal				TT = Treatment Technique			
MRDL=Maximum Residual Disinfectant Level				NTU = Nephelometric Turbidity Units			
MRDLG=Maximum Residual Disinfectant Level Goal				NR = Not regulated			
pCi/l= picocuries per liter (measure of radioactivity)				NA = Not available			

Definitions

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Action Level Goal (ALG): The level of contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Maximum Contaminant Level: The “Maximum Allowed” (MCL) 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: The “Goal” (MCLG) 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 Goal (MRDLG): The level of 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.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

NTU: A unit of measure to determine the concentration of particles in the water that affect clarity.

Parts per Million (ppm): milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

Parts per Billion (ppb): micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

Treatment Technique (TT): A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

<” Symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and that the contaminant in that sample was not detected.

The value reported in the table under “Level Found” for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed and the percentage of TOC required to be removed. A value of greater than one indicates that the water system is in compliance with TOC removal requirements.

Turbidity

Turbidity is a measure of the cloudiness of the water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1.0 NTU at any time. As reported above, the City of Oregon’s highest recorded turbidity result for 2013 was 0.09 and 100% of their samples met the turbidity limits.

Cryptosporidium

In December of 2008, the City of Oregon finished biweekly testing of the raw water from Lake Erie for the presence of *Cryptosporidium* as required by the EPA in the Enhanced Surface Water Treatment Rule. *Cryptosporidium* are microorganisms commonly found in lakes and rivers that is highly resistant to disinfection. During the course of testing in all of 2007 and 2008, there have been none detected in our raw water.

IDSE

Under the Stage 2 Disinfectants/Disinfection By-products Rule (D/DBPR), our public water system was required by the US EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and is intended to identify locations in our distribution system with elevated disinfection by-product concentrations. The locations selected for the IDSE may be used for compliance monitoring under the State 2 DBPR, beginning in 2012. Disinfection by-products are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection by-products are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). The US EPA sets the standards for controlling the levels of disinfectants and disinfectant by-products in drinking water, including both TTHM and HAA5.

Public Participation

The Northwestern Water and Sewer District encourages public interest and participation in our decisions affecting drinking water. The Board of Trustees' meetings are held regularly at 7:30 am every 1st and 3rd Thursday of each month, at the District's Operations Facility located at 12560 Middleton Pike, Bowling Green. The public is welcome to attend these meetings and can ask questions or address their concerns if desired. Find out more about the District on the Internet at <http://www.nwwsd.org>.

