

2008 Water Quality Report Oregon Master Meter Area



City of Oregon
Water Treatment Plant

Administration, Customer Service, and Operations:

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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

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.

Together, the Northwestern Water and Sewer District and the City of Oregon have prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included in this report is general health information, water quality test results, how to participate in decisions concerning your drinking water, and water system contacts. The District will notify you immediately if there is any reason for concern about the water.

Minimizing Peak Daily Flow Rates

Even with the City of Oregon's plant expansion, conservation is still important. Housing developments in Oregon and our satellites, 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.

Continuous Improvement

The City of Oregon broke ground in April of this year for a new elevated tank. The 2 million gallon tank, situated on relocated Lallendorf Road, will be a composite type tank, meaning it will have a concrete base with a steel bowl.

To be better prepared for emergency situations, the Oregon Water Plant will be bidding in 2009 for the installation of a new back-up generator to meet the needs of the city for years to come in the event of a power outage.

Also in the design phase is the replacement of the chlorination system at the Plant. As with all aging chemical/mechanical systems, safety is of utmost concern within our industry. The new system will incorporate new technology for safer operation, higher feed rates, along with automation and data acquisition through the on-site SCADA system.

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 (both tap 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 radioactive materials, and can pick up substances resulting from the presence of animals or human activity.

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, storm water runoff, and residential uses.
- D). Organic chemicals contaminants, including synthetic and volatile organics which are by-products 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.

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. The 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.

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 microbiological contaminants are available from the **Safe Drinking Water Hotline (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. 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)**, or at <http://www.epa.gov/safewater/lead>.

Cryptosporidium Testing

In January of 2007, the City of Oregon began twice monthly 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, there have been none detected in our raw water.

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.

2008 Water Quality Data							
Contaminant (Units)	Violation Y/N	Sample Year	MCL	Detected Level	Range of Detections	MCLG	Likely Source of Contamination
CITY OF OREGON DATA							
Microbiological Contaminants							
Turbidity (NTU)	No	2008	TT= 0.3	0.43	0.04 – 0.43	NA	Soil runoff
Turbidity (% samples meeting standards)	No	2008	TT	99.4%	99.4 - 100 %	NA	
Total Organic Carbon (TOC)	No	2008	TT	1.9	1.9 - 2.1	NA	Naturally present in the environment
Inorganic Contaminants							
Chlorite (ppm)	No	2008	1	0.057	<0.02 - 0.062	0.8	By products of drinking water chlorination
Fluoride (ppm)	No	2008	4	1.23	0.71 - 1.234	4	Water additive which promotes strong teeth; Erosion of natural deposits
Nitrate (ppm) (as Nitrogen)	No	2008	10	3.07	<0.2 - 3.07	10	Runoff from fertilizer use; sewage; erosion of natural deposits
NORTHWESTERN WATER AND SEWER DISTRICT DATA							
Volatile Organic Contaminants							
Total Trihalomethanes (TTHM) (ppb)	No	2008	80	56.6	30.4 - 79.6	0	By-products of drinking water chlorination
Total Trihalomethanes (TTHM) (ppb) IDSE	No	2008	80	NA	30.4 - 76.7	0	
Bromodichloromethane (ppb)	No	2008	NR	12.55	NA	0	EPA regulations require us to monitor for these contaminants while EPA considers setting a limit on them.
Bromoform (ppb)	No	2008	NR	0.95	NA	0	
Chloroform (ppb)	No	2008	NR	38.8	NA	0	
Dibromochloromethane (ppb)	No	2008	NR	5.5	NA	0	
Haloacetic Acids (HAA5) (ppb)	No	2008	60	15.3	5.7 - 28.9	NA	By-products of drinking water chlorination
Haloacetic Acids (HAA5) (ppb) IDSE	No	2008	60	NA	9.4 - 14.7	NA	
Inorganic Contaminants							
Copper (ppm)	No	2007	AL=1.3	0.026	NA	1.3	Corrosion of household plumbing systems
Residual Disinfectants							
Total Chlorine (ppm)	No	2008	4.0	0.81	0.78 - 0.88	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.
AL=Action Level	ppm = parts per million, or milligrams per liter
MCL= Maximum Contaminate Level	ppb = parts per billion, or micrograms per liter
MCLG= Maximum Contaminate 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

As you can see by the table, our system had no violations. **We're proud that your drinking water meets or exceeds all Federal and State standards.** We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water is SAFE at these levels. If you have any questions about this report or concerning your water utility, please contact the District Office at (419) 354-9090 during normal business hours.

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.

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 2008 was 0.43 and 99.4% of our samples met the turbidity limits.

The value reported in the table under "Level Found" for Total Organic Carbon (TOC) is the lowest ration 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.

Nitrates 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 advice from your health care provider.

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 first and third Thursday of each month, at the District's Operations Facility located at 12560 Middleton Pike, Bowling Green, Ohio. The public is welcome to attend these meetings to ask

Definitions:

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

IDSE: Initial Distribution System Evaluation is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THM's) and haloacetic acids (HAA's).

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): are units of measure for concentration of contaminant. A part per million corresponds to one second in approximately 11.5 days .

Parts per Billion (ppb): are units of measure for concentration of contaminant. A part per billion corresponds to one second in 31.7 years.

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.

Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).