

2009 Water Quality Test Results—Substances Found

In 2009, the Laboratory staff at our Jones Ferry Road Water Treatment Plant tested our drinking water almost 46,000 times for more than 150 substances in accord with State and Federal requirements. Most were not found at detectable levels.

Listed below are the substances that were detected, all of which were below the regulatory limits. Please see the [Definitions](#) below for an explanation of terms in the following table.

Substances Found in OWASA Drinking Water, January 1 – December 31, 2009 (NC Public Water System Identification Number: 03-68-010)						
Substance and Unit of Measurement	MCL violation? Yes=Y No=N	Highest Level Detected (except as noted)	Range Detected	Highest Level Allowed (MCL)	Highest Level Goal (MCLG)	Major Source in Drinking Water
Microbiological Substances						
Total Coliform Bacteria (percent)	N	1	0 to 1	presence of coliform bacteria in greater than 5% of the monthly samples	0	Naturally present in the environment
Turbidity (NTU)	N	0.18 and 100% of samples below 0.3	0.01 to 0.18	TT = 1 NTU and 95% of samples below 0.3	0.3	A measure of the cloudiness of water. It may be caused by inorganic soil particles or fragments of organic matter that can interfere with treatment.
Radiological Substances						
Combined radium (pCi/L) (last tested in 2008)	N	0.1	no range	5	0	Erosion of natural deposits
Inorganic Substances						
Copper (ppm) (90 th percentile) (last tested in 2008)	N	0.056	<0.050 to 0.073	AL=1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm)	N	0.71	no range	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Sulfate (ppm)	N	27	no range	250 [Secondary MCL]	N/A	A mineral that occurs naturally in soils

Substance and Unit of Measurement	MCL violation? Yes=Y No=N	Highest Level Detected (except as noted)	Range Detected	Highest Level Allowed (MCL)	Highest Level Goal (MCLG)	Major Source in Drinking Water
Disinfectants and Disinfection By-products						
Total Haloacetic Acids (ppb)	N	26.9 (running yearly average)	20.3 to 44.7 (individual sample sites)	60 (running yearly average)	0	By-product of drinking water chlorination
Total Trihalomethanes (ppb)	N	31.0 (running yearly average)	23.3 to 47.1 (individual sample sites)	80 (running yearly average)	0	By-product of drinking water chlorination
Bromodichloromethane (ppb)	N	4.3	no range	not regulated	not regulated	By-product of drinking water chlorination
Chloroform (ppb)	N	11	no range	not regulated	not regulated	By-product of drinking water chlorination
Chloramines (ppm)	N	2.9 (running annual average of monthly distribution system samples Jan., Feb. and April through Dec.)	0.1 to 3.9 (range of individual distribution system samples Jan., Feb. and April through Dec.)	MRDL = 4	MRDLG = 4	Water additive used to control microbes.
Chlorine (ppm)	N	0.78 (average of distribution system samples in March, when we disinfect with chlorine instead of chloramines.)	0.01 to 1.89 (range of individual distribution system samples in March.)	MRDL = 4	MRDLG = 4	Water additive used to control microbes.
Disinfection By-product Precursors						
Total Organic Carbon (removal ratio) - TREATED	N	1.6	1.31 to 1.88 (range of Removal Ratios)	TT= Removal Ratio greater than or equal to 1.0	N/A	Naturally present in environment.

DEFINITIONS

of words and phrases in the test results above

Maximum Contaminant Level Goal (MCLG) - 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 Contaminant Level (MCL) - 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. MCLs are set at very stringent levels. A person would have to drink 2 liters (about two quarts) of water at the MCL level every day for a lifetime to have a one-in-a-million chance of having adverse health effects from many regulated contaminants.

Secondary Maximum Contaminant Level – a guideline for aesthetic purposes (i.e., taste and odor), rather than a standard for health purposes.

Parts per million (ppm) - one part per million corresponds to about one minute in two years, or one penny in \$10,000. One ppm is equivalent to 1 milligram per liter (mg/L).

Parts per billion (ppb) - one part per billion corresponds to about one minute in 2,000 years, or one penny in \$10 million. One ppb is equivalent to 1 microgram per liter (ug/L).

Nephelometric Turbidity Unit (NTU) - a measure of cloudiness in water. Turbidity over 5 NTU is just barely 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.

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

90th Percentile – the contaminant level which 90 percent of the samples for a given water characteristic were below. The 90th percentile level is the required reporting unit for lead and copper.

Below Detectable Level (BDL) - a concentration that is below the level that can be detected with required tests using accepted laboratory methods.

Maximum Residual Disinfection Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of using disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL) - the highest level of a disinfectant allowed in drinking water. Disinfection is necessary to control microbial contaminants in drinking water.

Disinfection by-products - substances such as haloacetic acids and trihalomethanes, which are formed when chlorine or chloramines used to disinfect drinking water react with organic compounds naturally present in the water from our lakes. Federal standards require public water systems to limit the levels of haloacetic acids and trihalomethanes because they could be harmful at high levels.

Disinfection by-product precursors - organic carbon compounds that can combine with disinfectants (chlorine and chloramines) to form haloacetic acids and trihalomethanes as discussed above.

Removal Ratio - measure of the effectiveness of total organic carbon removal during our water treatment process. This ratio should be greater than or equal to 1.0. The Removal Ratio is the Federally required reporting unit for total organic carbon.

FOR MORE INFORMATION

If you have any questions about OWASA's drinking water services, please contact our Water Treatment Plant Laboratory Supervisor at (919) 537-4227, or our Water Supply and Treatment Manager at (919) 537-4232. We appreciate the opportunity to respond to any questions you may have and we welcome your feedback about our drinking water and any of our other services, policies, plans, etc.

We invite you to contact us at:

Orange Water and Sewer Authority



Public Water Supply No.: 03-68-010
400 Jones Ferry Rd., Carrboro, NC 27510
Telephone: (919) 968-4421 Fax: (919) 968-4464
E-mail: webmaster@owasa.org Website: www.owasa.org

A public non-profit agency providing water, sewer and reclaimed water services to the Carrboro-Chapel Hill community

EPA's Safe Drinking Water Hotline: (800) 426-4791