

Whitewater Water Utility

2011 Drinking Water Quality Report

The City of Whitewater is pleased to present to you the 2011 Drinking Water Quality Report. This report is designed to inform you about the quality of the drinking water and other services we deliver to you every day. This report communicates the source of the City's water supply and also summarizes all of the detected constituents from the sampling results for the year ending 2011 as well as any violations of Safe Drinking Water Standards. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the quality of your water.

If you have any questions about this report or concerns about your water utility, please contact the Director of Public Works, Dean Fischer, at 262-473-0140 or Water Superintendent Richard Lien at 262-473-0543.

The City obtains its drinking water from five-drilled ground water wells. Each of these wells is drilled and grouted in limestone. The aquifer we pump our water from gives our wells 1,000 GPM pumping capacities. Well #5, our oldest well, is located at the corner of Starin Rd. & N. Fremont St. at the main plant. It was constructed in 1943, drilled to a depth of 657', and produces 1,000 GPM. Well #6 is located on Carriage Drive. It was constructed in 1961, drilled to a depth of 1,015', and produces 1,100 GPM. Well #7 is located in Starin Park. It was constructed in 1965, drilled to a depth of 900', and produces 1,000 GPM. Well #8 is located on Commercial Avenue. It was constructed in 1977, drilled to a depth of 800', and produces 1,000 GPM. Well #9, our newest well, is located on Indian Mound Parkway. It was constructed in 1996, drilled to a depth of 950', and produces 1,000 GPM. At each well pumping station, fluoride solution is added to supplement the natural fluoride in the groundwater. The purpose of fluoride is to help reduce dental cavities. The city also chlorinates the water system. The purpose of chlorination is to disinfect the water supply. The city also reduces the iron content of the water by use of iron pressure filters.

The City of Whitewater has a Wellhead Protection Plan for Well #9. This plan includes hydrogeologic data, general groundwater and geology conditions of the area, an inventory of known and potential contaminant sources, wellhead protection strategies, and a wellhead protection ordinance and resolution. This report is on file at the Water Utility and Department of Public Works.

The Whitewater Water Utility routinely monitors for constituents in your drinking water according to Federal and State laws. The Water Utility collects samples from its five wells for testing of Volatile Organic Compounds, Synthetic Organic Compounds, & Inorganic Compounds as well as Radioactive Contaminants. Fifteen samples per month minimum are collected for total coliform testing. The following table shows the detected constituents resulting from our monitoring for the period of January 1 to December 31, 2011.

In the following table 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:

- *Non-Detects (ND)* – laboratory analysis indicated that the constituent is not present.
- *Parts per millions (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* – 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.
- *Parts per quadrillion (ppq) or Picograms per liter (picograms/l)* – one part per quadrillion corresponds to one minute in 2,000,000,000 years or a single penny in \$10,000,000,000,000.
- *Picocuries per liter (pCi/L)* – Picocuries per liter is a measure of the radioactivity in water.
- *Millirems per year (mrem/yr)* – Measure of radiation absorbed by the body.
- *Million Fibers per Liter (MFL)* – million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- *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.
- *Treatment Technique (TT)* – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- *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.

DISINFECTION BY-PRODUCTS

| Contaminant (units) | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2011) | Violation | Typical Source of Contaminant |
|---------------------|-----|------|-------------|----------|-----------------------------------|-----------|---|
| HAA5 (ppb) | 60 | 60 | 7 | Nd-7 | | NO | |
| TTHM (ppb) | 80 | 0 | 13.5 | 1.3-13.5 | | NO | By-product of drinking water chlorination |

INORGANIC CONTAMINANTS

| Contaminant (units) | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2011) | Violation | Typical Source of Contaminant |
|-----------------------|--------|------|-------------|---|-----------------------------------|-----------|---|
| ARSENIC (1) (ppb) | 10 | n/a | 4 | Nd-4 | | NO | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes |
| BARIUM (ppm) | 2 | 2 | .120 | .057-.120 | | NO | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| CADMIUM (ppb) | 5 | 5 | .1 | Nd-.1 | | NO | Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints |
| COPPER (ppm) | AL=1.3 | 1.3 | .27 | 0 of 30 results were above the action level | | NO | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| FLOURIDE (ppm) | 4 | 4 | 1.6 | .2-1.6 | | NO | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| LEAD (ppb) | AL=15 | 0 | 4.40 | 1 of 30 results were above the action level | | * | Corrosion of household plumbing systems; Erosion of natural deposits |
| NICKEL (ppb) | 100 | | 6.8000 | 1.8000-6.8000 | | NO | Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products |
| NITRATE (NO3-N) (ppm) | 10 | 10 | .35 | nd-.35 | | NO | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| CHROMIUM (ppb) | 100 | 100 | 2 | 1-2 | 3/17/2008 | NO | Discharge from steel and pulp mills; Erosion of natural deposits |
| SODIUM (ppm) | n/a | n/a | 13.00 | 6.80-13.00 | | NO | N/A |
| SELENIUM (ppb) | 50 | 50 | 3 | nd-3 | | NO | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines |

*Systems exceeding a lead and/or copper action level must take actions to reduce lead and/or copper in the drinking water. The lead and copper values represent the 90th percentile of all compliance samples collected. If you would like more information on the number of sites or the actions taken to reduce these levels, please contact your water supply operator.

UNREGULATED CONTAMINANTS

| Contaminant (units) | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2011) | Violation | Typical Source of Contaminant |
|----------------------------|-----|------|-------------|------------|-----------------------------------|-----------|-------------------------------|
| Bromochloromethane (ppb) | n/a | n/a | .20 | .20 | | No | N/A |
| Bromodichloromethane (ppb) | n/a | n/a | 3.90 | .34-3.90 | | No | N/A |
| Bromoform (ppb) | n/a | n/a | 2.20 | nd-2.20 | | No | N/A |
| Chloroform (ppb) | n/a | n/a | 6.90 | .92-6.90 | | No | N/A |
| Dibromochloromethane (ppb) | n/a | n/a | 2.70 | nd-2.70 | | No | N/A |
| Dibromomethane (ppb) | n/a | n/a | .45 | Nd-.45 | | No | N/A |
| Naphthalene (ppb) | n/a | n/a | .46 | .46 | 7/10/2007 | No | N/A |
| Sulfate (ppm) | n/a | n/a | 25.00 | 6.90-25.00 | | No | N/A |

RADIOACTIVE CONTAMINANTS

| Contaminant (units) | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2011) | Violation | Typical Source of Contaminant |
|----------------------------------|-----|------|-------------|---------|-----------------------------------|-----------|-------------------------------|
| GROSS ALPHA, INCL. R & U (N/A) | n/a | n/a | 5.7 | Nd-5.7 | | No | Erosion of natural deposits |
| RADIUM (226 + 228) (pCi/l) | 5 | 0 | 5.4 | 3.3-5.4 | | No | Erosion of natural deposits |
| COMBINED URANIUM (ug/l) | 30 | 0 | 0.8 | 0.2-0.8 | | No | Erosion of natural deposits |
| GROSS ALPHA, EXCL. R & U (pCi/l) | 15 | 0 | 5.2 | .3-5.2 | | No | Erosion of natural deposits |

VOLATILE ORGANIC CONTAMINANTS

| Contaminant (units) | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2011) | Violation | Typical Source of Contaminant |
|---------------------|-----|------|-------------|---------|-----------------------------------|-----------|---|
| BENZENE | 5 | 0 | .1 | ND-.4 | | No | Discharge from factories; leaching from gas storage tanks & landfills |
| P-DICHLOROBENZENE | 75 | 75 | .9 | ND-.2.3 | | No | Discharge from industrial chemical factories |

Additional Health Information

Some people who drink water containing **arsenic** in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

(1) While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentration and is linked to other health effects such as skin damage and circulatory problems.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. 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.

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. The Environmental Protection Agency /Communicative Disease Center guidelines on appropriate means to lessen the risk of infection by microbiological contaminants or more information about other contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's 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 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.

The Water Utility is pleased to report that our drinking water is safe and meets federal and state requirements.

The Water Utility constantly works to provide top quality water for our customers. We would ask our customers to help protect our water resources. Participating in Cleansweep programs, conservation of water, abandonment of wells, amongst other measures can do this.

**En Español:
Este informe contiene
informacion muy
importante sorbe su agua
beber. Traduzcalo o hable
con alguien que lo
entienda bien.**