

2021 Consumer Confidence Report Data MARKESAN WATERWORKS, PWS ID: 42402184

Water System Information

If you would like to know more about the information contained in this report, please contact Anthony A Doro at (920) 398-3767.

Opportunity for input on decisions affecting your water quality

Second Tuesday of each month at 7:00 P.M. at City Hall

Health Information

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 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 (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 systems 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 Environmental Protection Agency's safe drinking water hotline (800-426-4791).

Source(s) of Water

| Source ID | Source | Depth (in feet) | Status |
|-----------|-------------|-----------------|--------|
| 2 | Groundwater | 301 | Active |
| 3 | Groundwater | 400 | Active |

To obtain a summary of the source water assessment please contact, Anthony A Doro at (920) 398-3767.

Educational Information

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 source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally- occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- 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 be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health.

Definitions

| Term | Definition |
|--------------------|--|
| AL | Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. |
| HAL | Health Advisory Level: The concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public notice. |
| Level 1 Assessment | A Level 1 assessment is a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system. |
| Level 2 Assessment | A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine, if possible, why an E. coli MCL violation has occurred or why total coliform bacteria have been found in our water system, or both, on multiple occasions. |
| MCL | Maximum Contaminant Level: 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. |

| Term | Definition |
|-------------|--|
| MCLG | Maximum Contaminant Level Goal: 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. |
| MFL | million fibers per liter |
| MRDL | Maximum residual disinfectant level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. |
| MRDLG | Maximum residual disinfectant level goal: 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 the use of disinfectants to control microbial contaminants. |
| mrem/year | millirems per year (a measure of radiation absorbed by the body) |
| NTU | Nephelometric Turbidity Units |
| pCi/l | picocuries per liter (a measure of radioactivity) |
| ppm | parts per million, or milligrams per liter (mg/l) |
| ppb | parts per billion, or micrograms per liter (ug/l) |
| ppt | parts per trillion, or nanograms per liter |
| ppq | parts per quadrillion, or picograms per liter |
| SMCL | Secondary drinking water standards or Secondary Maximum Contaminant Levels for contaminants that affect taste, odor, or appearance of the drinking water. The SMCLs do not represent health standards. |
| TCR | Total Coliform Rule |
| TT | Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water. |

Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants which were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

Disinfection Byproducts

| Contaminant (units) | Site | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2021) | Violation | Typical Source of Contaminant |
|-----------------------|------|-----|------|-------------|-------------|--------------------------------|-----------|--|
| | | | | | | | | stainless steel and alloy products. |
| NITRATE (N03-N) (ppm) | | 10 | 10 | 8.73 | 0.75 - 9.60 | | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| SELENIUM (ppb) | | 50 | 50 | 1 | 0 - 1 | 2/25/2020 | No | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines |
| SODIUM (ppm) | | n/a | n/a | 4.90 | 4.10 - 4.90 | 2/25/2020 | No | n/a |

| Contaminant (units) | Action Level | MCLG | 90th Percentile Level Found | # of Results | Sample Date (if prior to 2021) | Violation | Typical Source of Contaminant |
|---------------------|--------------|------|-----------------------------|--|--------------------------------|-----------|--|
| COPPER (ppm) | AL=1.3 | 1.3 | 0.1200 | 0 of 10 results were above the action level. | 7/28/2020 | No | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| LEAD (ppb) | AL=15 | 0 | 3.30 | 0 of 10 results were above the action level. | 7/28/2020 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

| Contaminant (units) | Site | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2021) | Violation | Typical Source of Contaminant |
|---------------------|------|-----|------|-------------|-------|--------------------------------|-----------|---|
| HAA5 (ppb) | D-2 | 60 | 60 | 0 | 0 | | No | By-product of drinking water chlorination |
| TTHM (ppb) | D-2 | 80 | 0 | 3.3 | 3.3 | | No | By-product of drinking water chlorination |

Inorganic Contaminants

| Contaminant (units) | Site | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2021) | Violation | Typical Source of Contaminant |
|---------------------|------|-----|------|-------------|-----------------|--------------------------------|-----------|---|
| ARSENIC (ppb) | | 10 | n/a | 2 | 0 - 2 | 2/25/2020 | No | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes |
| BARIUM (ppm) | | 2 | 2 | 0.085 | 0.031 - 0.085 | 2/25/2020 | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| FLUORIDE (ppm) | | 4 | 4 | 0.1 | 0.1 - 0.1 | 2/25/2020 | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| NICKEL (ppb) | | 100 | | 1.5000 | 0.5000 - 1.5000 | 2/25/2020 | No | Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, |

Radioactive Contaminants

| Contaminant (units) | Site | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2021) | Violation | Typical Source of Contaminant |
|----------------------------------|------|-----|------|-------------|-----------|--------------------------------|-----------|-------------------------------|
| GROSS ALPHA, EXCL. R & U (pCi/l) | | 15 | 0 | 2.4 | 1.8 - 2.4 | 2/25/2020 | No | Erosion of natural deposits |
| COMBINED URANIUM (ug/l) | | 30 | 0 | 0.5 | 0.4 - 0.5 | 2/25/2020 | No | Erosion of natural deposits |

Synthetic Organic Contaminants including Pesticides and Herbicides

| Contaminant (units) | Site | MCL | MCLG | Level Found | Range | Sample Date (if prior to 2021) | Violation | Typical Source of Contaminant |
|---------------------|------|-----|------|-------------|-----------|--------------------------------|-----------|---|
| ATRAZINE (ppb) | | 3 | 3 | 0.0 | 0.0 - 0.0 | 2/21/2017 | No | Runoff from herbicide used on row crops |

Contaminants with a Health Advisory Level or a Secondary Maximum Contaminant Level

The following tables list contaminants which were detected in your water and that have either a Health Advisory Level (HAL) or a Secondary Maximum Contaminant Level (SMCL), or both. There are no violations for detections of contaminants that exceed Health Advisory Levels, Groundwater Standards or Secondary Maximum Contaminant Levels. Secondary Maximum Contaminant Levels are levels that do not present health concerns but may pose aesthetic problems such as objectionable taste, odor, or color. Health Advisory Levels are levels at which concentrations of the contaminant present a health risk.

| Contaminant (units) | Site | SMCL (ppm) | HAL (ppm) | Level Found | Range | Sample Date (if prior to 2021) | Typical Source of Contaminant |
|---------------------|------|------------|-----------|-------------|--------------|--------------------------------|---|
| CHLORIDE (ppm) | | 250 | | 12.00 | 4.40 - 12.00 | 7/28/2020 | Runoff/leaching from natural deposits, road salt, water softeners |

| Contaminant (units) | Site | SMCL (ppm) | HAL (ppm) | Level Found | Range | Sample Date (if prior to 2021) | Typical Source of Contaminant |
|---------------------|------|------------|-----------|-------------|---------------|--------------------------------|--|
| IRON (ppm) | | 0.3 | | 0.05 | 0.00 - 0.05 | 7/28/2020 | Runoff/leaching from natural deposits, industrial wastes |
| MANGANESE (ppm) | | 0.05 | 0.3 | 0.02 | 0.01 - 0.02 | 7/28/2020 | Leaching from natural deposits |
| SULFATE (ppm) | | 250 | | 18.00 | 16.00 - 18.00 | 7/28/2020 | Runoff/leaching from natural deposits, industrial wastes |
| ZINC (ppm) | | 5 | | 0.01 | 0.00 - 0.01 | 2/21/2017 | Runoff/leaching from natural deposits, industrial wastes |

Additional Health Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 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. Females who are or may become pregnant should not consume water with nitrate concentrations that exceed 10 ppm. There is some evidence of an association between exposure to high nitrate levels in drinking water during the first weeks of pregnancy and certain birth defects. The Wisconsin Department of Health Services recommends people of all ages avoid long-term consumption of water that has nitrate level greater than 10 milligrams per liter (mg/L).

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. Markesan Waterworks 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 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.