

2009 Water Quality Report for the City of Manton

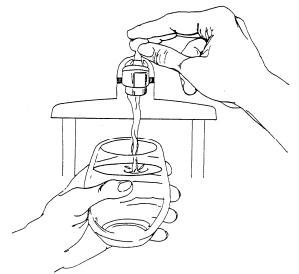


This report covers the drinking water quality for the City of Manton for the calendar year 2009. This information is a snapshot of the quality of the water that we provided to you in 2009. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from three groundwater wells located at Griswold St., State St., and on Seventh St. The State has performed an assessment of our source water for 2003. We now have copies; they are available at City Hall upon request.

We are in the process of upgrading our system. We plan on (1) Drilling a new well, (2) Adding an iron removal plant, (3) Adding new water mains in needed areas, and (4) Replacing the old water tower with a new, larger one. Also, our well #1 will be abandoned and plugged due to its vulnerability and depth. 75% of the work would be funded utilizing federal grant funds, and the remainder of funding will be provided through a federal low interest loan as the required match from the city. We also performed lead and copper testing, with all tests results indicating far below the established minimum limits.

- **Contaminants and their presence in water:** 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 EPA's **Safe Drinking Water Hotline (800-426-4791)**.
- **Vulnerability of sub-populations:** 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 Safe Drinking Water Hotline (800-426-4791).
- **Sources of Drinking Water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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.
 - Radioactive contaminants**, which can be naturally occurring, or be the result of oil and gas production and mining activities.
 - 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.



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 provide the same protection for public health.



Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2009 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2009. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one

year old.

Terms and abbreviations used below:

- **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.
- **N/A:** Not applicable **ND:** not detectable at testing limit **ppb:** parts per billion or micrograms per liter **ppm:** parts per million or milligrams per liter.
- **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Regulated Contaminants	MCL	MCLG	Our Water	Range of Detections	Violation Y / N	Typical Source of Contaminant
Nitrate (ppm)	10	10	.8	ND to .8	N	Runoff from fertilizer use; Leaching from septic tanks, sewage: Erosion of natural deposits
Fluoride (ppm)	4	4	ND	ND	N	Erosion of natural deposits
Unregulated Contaminants						
Sodium (ppm)	N/A	N/A	17.0	ND to 17.0	N/A	Erosion of natural deposits

(Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether they need to regulate those contaminants)

Microbial Contaminants	MC L	MCLG	Number of Detections	Violation Y / N	Typical Source of Contaminant
Total Coliforms	<1	1	0	N	Naturally present in the environment

(Coli forms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. No Ecoli or Fecal coliform bacterial were present in any of the samples in 2009)

Distribution System Contaminants	Action Level	MCL G	Our Water*	Date of Sample	Number of Samples Over Action Level	Source
Lead (ppb)	A.L. = 15	0	.002-----0.04	09/02/2009	0	Corrosion of household plumbing
Copper (ppm)	A.L. = 1.3	1.3	N.D.-----1.01	09/02/2009	0	Corrosion of household plumbing

(* 90 percent of samples at or below this level (Pb. .002 PPB) (Cu. .345 PPM)

Other Constituents	High/Low Range	Average	Typical Source
Old Wells (ppm) Iron	0.1	0.1	Erosion of natural deposits
New Well (ppm) Iron	Ran to waste for tests Not in system .9	Ran to waste for tests Not in system .9	Erosion of natural deposits

Is our water system meeting other rules that govern our operations? The State and EPA require us to test our water on a regular basis to ensure its safety. We performed over 300 tests for over 140 contaminants. We met all the monitoring and reporting requirements for 2009.

Source Water Assessment: Your water comes from 3 groundwater wells, well #1 - 50 feet, well #3 - 100 feet, well #4 – 240 feet; well #4 is not in use at this time (but could be used in case of emergency). The State performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from “very low” to “very-high”, based primarily on geologic sensitivity, water chemistry, and contaminant sources. The susceptibility of our source is well #1 Griswold street pump house (Moderately High) well #3 State street pump house (Moderately High) well #4 Seventh street pump house (Moderately Low). We have taken steps to protect our sources by doing required testing, and we are close to completion of a wellhead protection program. If you would like to know more about this report, please contact the city at one of the numbers listed below. Upon completion a copy will be available at City Hall upon request.

What about the iron and the stained fixtures? Many people complained about the taste and odor of water when Well #4 was initially put on line. We conducted extensive tests to determine that the water from our new well had a significantly higher iron content than our existing wells. High iron content is *not* a health issue. There were no reports of illness associated with the water. Most of the complaints received were in regard to staining of sinks, tubs, and clothing in washing machines. This problem is common in ground water, but the city has not had to deal with it until now. The only solution at the time was to place the new well #4 off-line. Although we have been investigating alternative solutions, we have not been using the well #4 water in our system since that time, but the water can still be utilized in an emergency situation.(such as during a fire) We plan on drilling new well #5 near well #4 and will run both wells through a new iron removal plant. This should correct the iron problem, but it will also require the addition of limited amounts of chlorine to the water system.

We are committed to providing you safe, reliable, and healthy water. We are pleased to provide you with this information to keep you fully informed about your water. We will be updating this report annually, and will also keep you informed of any problems that may occur throughout the year, as they happen.

We invite public participation in decisions that affect drinking water quality. Commission meetings are held on the second Monday of every month at 7:00 p.m. These meetings are held at the Manton VFW Post on State Street unless otherwise posted at City Hall.

This report will not be mailed to individual households. For more information about your water, or the contents of this report, contact Bryan Vincent at 231-824-6731 or Manton City Offices at 231-824-3572 or online at www.mantonmichigan.org; 2009 Water Quality Report CCR. A copy of the report is on file at the Manton Public Library.

City of Manton Receives MDNRE Grant to Develop Wellhead Protection Program

The City of Manton was recently awarded a grant from the Michigan Department of Environmental Quality (MDEQ). The grant will be used to evaluate the groundwater areas that supply award-winning drinking water to the City. The City is developing a wellhead protection plan in order to protect the groundwater which supplies the needs of our community. One of the goals of this plan is to increase resident's awareness about the vulnerability of Manton's groundwater to contamination. It is important that each one of us recognize that we can have a direct influence on the quality of the groundwater which Manton uses.

What is Wellhead Protection?

Wellhead protection is, simply stated, protecting the land area surrounding a well in order to prevent contamination of the groundwater that is likely to be drawn into the well during pumping. Wellhead protection plans have been developed for several communities around Michigan, and in over 30 states nationwide. These plans are encouraged by the Michigan Department of Natural Resources and Environment (MDNRE). MDNRE is responsible for setting safe drinking water standards and for protecting natural resources, such as groundwater.

What is Groundwater?

Many people think of groundwater as an underground river or lake, but actually it occurs wherever water fills the tiny spaces in between grains of any earth materials (rock or soil). Earth materials that can transmit large quantities of water through these porous spaces are called **AQUIFERS**. Sand and gravel typically are considered to be good aquifers, while materials such as clay and shale (a type of rock) are not. Groundwater occurs beneath the land surface in Michigan. In many places it lies just a few feet underground. However, in some aquifers the groundwater lies several hundred feet beneath the surface. Groundwater usually begins as rain and melted snow which falls across the land and then seeps into the ground. Because this water was once at the surface, human activities can affect the quality of the groundwater. We need to be aware that the things we do at the earth's surface can affect the quality of the water we cook with, wash with, and of course, drink.

Why Protect Groundwater?

First of all, polluted groundwater can pose health hazards to those who drink it. Second, once it is contaminated, groundwater is very difficult to clean (if it can be cleaned at all). If the groundwater near Manton were to become contaminated, the city would likely be required to install filters to purify the water, or be forced to find an alternative source of water for its citizens. This can be very expensive. When it comes to protecting groundwater, the old saying "an ounce of prevention is worth a pound of cure", applies. Fortunately, the city wells of Manton do not have a contamination problem at this point. The wellhead protection plan will address potential contamination sources in the wellhead area and help assure that Manton maintains the quality of its groundwater.

How Can You Help?

- Inform the water department of any potential contamination sources (see list below). Be sure to indicate the type and location of each source.
- Have abandoned water wells properly capped and sealed.
- Install appropriate backflow prevention devices to possible contamination sources such as garden hoses, deep sinks, and lawn irrigation systems.
- Conserve water: Some contaminants are naturally degraded within soils. The less groundwater you use, the longer it stays in the ground, and the greater chance that it can clean itself.
- Be aware that your activities at the land surface can have a direct effect on the water you use every day.

Some Potential Contamination Sources:

- Abandoned Wells
- Abandoned Underground Storage Tanks
- Abandoned Surface Storage Tanks
- Past Spills/Leaks
- Abandoned Dry Cleaners
- Old Vehicle Repair or Salvage Operations
- Abandoned Landfills/Dump Sites
- Backflow conditions caused by unprotected plumbing i.e., underground irrigation systems and garden hoses.

Please help our city protect its water supply by supporting the wellhead protection program. A Wellhead Protection Team (WPT) meets quarterly to address issues that relate to the quality of the city's water supplies. You are invited to participate in the discussions and provide input to the WPT members at any of these meetings. Any information or questions can be directed to Bryan Vincent, Department of Public Works Superintendent at (231) - 824 - 6731.

