

**CITY OF MORRISON WATER DEPARTMENT 1950350**  
**For the period of January 1 to December 31, 2004**  
**HOW SAFE WAS OUR WATER?**

City of Morrison Water Department is proud of the fine drinking water it provides. This annual report shows the source of our water, lists the results of our test, and contains much important about water and health. The City of Morrison Water Department will notify you immediately if there is any reason for concern about our water.

The source of drinking water used by MORRISON is Ground.

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Este informe contiene informaci ó n muy importante sobre el agua que usted bebe. Trad ú zcalo ó hable con alguien que lo entienda bien.

### **Source of Drinking Water**

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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 pickup substances resulting from the presence of animals or from human activity.

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 at (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 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 microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.

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

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

### **Contaminants that may be present in source water include:**

- Micro 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 may be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil gas production, mining, or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processed and petroleum production and may also come from gas stations, urban storm runoff, and septic systems; and
- Radioactive contaminants, which may be naturally occurring or be the result of oil and gas production and mining activities.

### **Availability of Morrison Source Water Assessment**

Below is a summary of the IEPA source water assessment of Morrison's water system. The full report is available for viewing at City Hall and Odell Public Library.

### **Source Water Assessment**

Based on information obtained in a Well Site Survey published in 1989 by the Illinois EPA, several potential sources are located within 1,000 feet of the wells.

The Illinois EPA has determined that the Morrison Community Water Supply's source water is not susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and available hydrogeologic data on the wells.

Furthermore, in anticipation of the US EPA's proposed Ground Water Rule, the Illinois EPA has determined that the Morrison Community Water Supply is not vulnerable to viral contamination. This determination is based upon the evaluation of the following criteria during the Vulnerability Waiver Process; the community's wells are properly constructed with sound integrity and proper siting conditions; a hydraulic barrier exists which should prevent pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer, which should prevent the movement of pathogens into the wells, well hydraulics were not considered a significant factor in the susceptibility determination. Hence, well hydraulics were not evaluated for this system ground water supply.

**Source Water Protection Efforts**

The Illinois Environmental Protection Act provided minimum protection zones of 200 feet for your wells. These minimum protection zones are regulated by the Illinois EPA. To further reduce the risk to source water, the Facility has implemented a wellhead protection program which includes the proper abandonment of potential routes of groundwater contamination and correction of sanitary defects at the water treatment facility. This effort resulted in the community water supply receiving a special exception permit from the Illinois EPA which allows a reduction in monitoring. The outcome of this monitoring reduction has saved the community considerable laboratory analysis costs.

**Vulnerability waiver**

Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, our water supply was issued a vulnerability waiver renewal for SOCs at Tap2 – Well number 11910 (Well #4). No monitoring for SOCs will be required, between January 1, 2005 through December 31, 2007.

**2004 Water Quality Data**

**- Definition of Terms -**

**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.

**Level Found:** This column represents an average of sample result data collected during the CCR calendar year. In some cases, it may represent a single sample, if only one sample was collected.

**Range of Detections:** This column represents a range of individual sample results from lowest to highest that were collected during the CCR calendar year.

**Date of Sample:** If a date appears in the column, the Illinois EPA requires monitoring for this contaminant less than once per year because of the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the Consumer Confidence Report calendar year.

**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.

**Nd:** Not Detectable at testing limits

**n/a:** Not Applicable

**ppm:** Parts per Million or milligrams per liter

**ppb:** Parts per Billion or micrograms per liter

**pCi/l:** Picocuries per liter, used to measure radioactivity

**Lead and Copper**

Lead MCLG	Lead Action Level	Lead 90 <sup>th</sup> Percentile	# Sites Over Lead (AL)	Copper MCLG	Copper Action Level (AL)	Copper 90 <sup>th</sup> Percentile	# Sites Over Copper AL	Likely Sources of Contamination	Date of Sample
0 ppb	15 ppb	<5 ppb	0	1.3 ppm	1.3 ppm	0.11 ppm	0	Corrosion of household plumbing systems; Erosion of natural deposits	/02

**Coliform Bacteria**

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive Total Coliform Samples in any month	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of positive E. Coli or Fecal Coliform Samples	Violation	Likely Sources of Contamination
0	1 positive monthly sample	1	Fecal Coliform or E. Coli MCL; A routine sample are total coliform positive, and one is also fecal coliform of E. Coli positive.	0	No	Naturally present in the environment

**Regulated Contaminants**

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Chlorine	Monthly	0.392	0.82-0.392	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes

**Regulated Contaminants for Tap 1**

<i>Regulated Contaminants Tap 1 – Main Pumping Station</i>	MCLG	MCL	Level Found	Range of Detection	Violation	Date of Sample
<b><u>Radioactive Contaminants</u></b>						
<b>GROSS ALPHA (pCi/I)</b> Erosion of natural deposits	0	15	2	2 – 3	No	4/15/03
<b>COMBINED RADIUM (pCi/I)</b> Erosion of natural deposits	0	5	3.10	nd-5.000	No	4/15/03
<b><u>Inorganic Contaminants</u></b>						
<b>ARSENIC (ppb)</b> Erosion of natural deposits; Runoff from orchards; Runoff from electronics production waste.	n/a	10	0.61	nd -.61	No	8/24/04
<b>BARIUM (ppm)</b> Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	2	2	0.1	0.04-0.1	No	8/24/04
<b>FLOURIDE (ppm)</b> Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	4	4	1.1	0.89 – 1.11	No	8/24/04
<b><u>Unregulated Contaminants</u></b>						
<b>SULFATE (ppm)</b> Erosion of naturally occurring deposits	n/a	n/a	20	20 - 24	No	8/24/04
<b><u>State Regulated Contaminants</u></b>						
<b>IRON (ppb)</b> Erosion from naturally occurring deposits	n/a	1000	nd	nd-0.83	No	8/24/04
<b>MANGANESE (ppm)</b> Erosion from naturally occurring deposits	n/a	150	1.0	1-2	No	8/24/04
<b>SODIUM (ppm)</b> Erosion from naturally occurring deposits; Used as water softener	n/a	n/a	7.2	4.5 – 7.2	No	8/24/04

**Regulated Contaminants for Tap 2**

<i>Regulated Contaminants Tap2 – Kelly Park</i>	MCLG	MCL	Level Found	Range of Detection	Violation	Date of Sample
<b><u>Radioactive Contaminants</u></b>						
<b>GROSS ALPHA (pCi/I)</b> Erosion of natural deposits	0	15	3	2 - 3	No	11/30/04
<b>COMBINED RADIUM (pCi/I)</b> Erosion of natural deposits	0	5.0	5.0	3.1-5.2	No	11/30/04
<b><u>Inorganic Contaminants</u></b>						
<b>ARSENIC (ppb)</b> Erosion of natural deposits; Runoff from orchards; Runoff from electronics production waste.	n/a	0.5	nd	nd - .61	No	8/23/04

<b>BARIUM (ppm)</b> Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	2	2	.074 - .1	0.073-0.095	No	8/23/04
<b>FLOURIDE (ppm)</b> Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	4	4	0.88	.88 – 1.11	No	8/23/04
<b><u>Unregulated Contaminants</u></b>						
<b>SULFATE (ppm)</b> Erosion of naturally occurring deposits	n/a	n/a	24	20 - 24	No	8/23/04
<b><u>State Regulated Contaminants</u></b>						
<b>IRON (ppb)</b> Erosion from naturally occurring deposits	n/a	1000	0.083	nd - .083	No	8/23/04
<b>MANGANESE (ppm)</b> Erosion from naturally occurring deposits	n/a	150	2.0	1-2	No	8/23/04
<b>SODIUM (ppm)</b> Erosion from naturally occurring deposits; Used as water softener	n/a	n/a	4.5	4.5 – 7.2	No	8/23/04

### *Water Quality Data Table Footnotes*

**GROSS ALPHA (cpCi/l)**

The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be a level of concern for beta particles.

**COMBINED RADIUM (pCi/l)**

**UNREGULATED CONTAMINANTS**

A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effect language. The purpose for monitoring this contaminant is to assist USEPA in determining the unregulated contaminants in drinking water, and whether future regulation is warranted.

**IRON**

This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.

**MANGANESE**

**SODIUM**

There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the level is greater than 20 mg/l, and you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

**About the Data**

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.

**What this Table Means**

As you can see by the table, our system had no violations. We are proud that your drinking water meets or exceeds all Federal and State Requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

We, at the Morrison Water Department, work around the clock to provide top quality water to every tap. We ask that all our customers help us protect water sources, which are the heart of our community, our way of life and our children's future.

### *2000 – 2004 Non-regulated Contaminant Detections*

The following table identifies contaminants detected within the past five years. State and federal regulations do not require monitoring for these contaminants and no maximum level (MCL) has been established. These detections are for information purposes only. No mandated health effects language exists. The CCR Rule does not require that this information be reported, however, it may be useful when evaluating possible sources of contamination or characterizing overall water quality.

***- Definition of Terms -***

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**Range of Detections:** This column represents a range of individual sample results, from lowest to highest that were collected during the CCR calendar year.

**Date of Sample:** If a date appears in the column, the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the CCR calendar year.

***Detected Contaminants – Tap 1***

<b><i>Contaminant (unit of Measurement Typical Source of Contaminant</i></b>	<b><i>Level Found</i></b>	<b><i><u>Range of Detection</u></i></b>	<b><i><u>Date of Sample</u></i></b>
<b><u>Additional Contaminants</u></b> <b>BORON (ppb)</b> Erosion of naturally occurring deposits; Used in detergents and as a water softener; Used in production of glass, cosmetics, pesticides, fire retardants and for leather tanning	66.00	57.000-66.000	8/22/01