# City of Minneapolis 2005

## Drinking Water Quality Report

## Water Water Everywhere...

Seventy Percent of our Earth's Surface is covered with water. Of all that water 97 percent is in the oceans, and 3 percent is fresh water. **Less than 1 percent of fresh water** is available to humans as drinking water! The rest of the fresh water is locked in glaciers, icecaps and inland seas.

Minneapolis residents live in the Upper Mississippi Watershed District. The term "watershed" describes an area of land that drains down to the lowest point. The water moves through a network of drainage pathways, both underground and on the surface. Generally, these pathways converge into streams and rivers, which become progressively larger as the water moves on downstream, eventually reaching an estuary and the ocean...continued on Page 4.

English-
Attention. If you want help translating this information, call- 612-673-3737

Spanish-
Atención. Si desea recibir asistencia gratuita para traducir esta información, llama 612-673-2700

Somali-
Ogow. Haddii aad dooneyso in lagaa kaalmeeyo tarjamadda macluumaadkani oo lacag la' aan wac 612-673-3500

Hmong
Ceeb toom. Yog koj xav tau kev pab txhais cov xov no rau koj dawb, hu 612-673-2800

## Source of Water

Before the Minneapolis Water Works can deliver water to your home, it must first be thoroughly tested in certified laboratories that can detect trace amounts of contaminants. These test results for last year are shown in the table on the next page. Substances that have been found in previous years' testing are also listed in the table, along with the year that they were found.

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. United States Environmental Protection Agency (USEPA) regulates substances that are potentially harmful to human health and have at least a reasonable possibility of being found in either water sources or finished drinking water. Our water is monitored for these regulated contaminants. We test for some substances frequently: daily, weekly, quarterly, or annually. The levels of some things, however, change little over time, or the chance of finding a detectable amount is expected to be low. These contaminants are monitored less than annually.

Minneapolis water is tested for more than 100 different contaminants. Only those detected are listed in the table. Tested substances fall into one of five different categories:

**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 occur naturally 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 occur naturally or result from oil and gas production and mining activities

## Understanding the Laboratory Results

The **Level Found** can be the highest amount found in the water or the average of all samples analyzed, depending on the regulation. If multiple samples were tested in 2004, the lowest and highest detected values are listed under **Range of Detections**.The highest level of a substance allowed in drinking water is the Maximum Contaminant Level (**MCL**), which is set by the USEPA. Some contaminants also have MCL goals (**MCLGs**). This is the level of a substance where there is no known or expected health risk. MCLGs allow for a margin of safety. MCLs are set as close to MCLGs as feasible using the best available water treatment processes.

Unregulated substances do not have MCLs. They are assessed by comparing the detected amount to state standards known as health risk limits. If an unacceptable amount of any substance is ever found in our water, the Minneapolis Water Works will notify residents immediately and take corrective action to eliminate the problem. The MCL for lead and copper is known as the Action Level (AL). This is the concentration which, if exceeded, triggers treatment or other requirements a water system must follow. Ninety percent of all samples tested must be below this concentration.

The Maximum Residual Disinfectant Level (**MRDL**) is the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary to control microbial contaminants. The MRDL Goal (**MRDLG**) is the level of disinfectant where there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Turbidity is a measure of water clarity monitored at the Minneapolis Water Works Treatment Plant. Certain treatment techniques (TT) are required to reduce turbidity and eliminate microorganisms in the drinking water. Regulations require turbidity to be <0.3 NTU 95% of the time and <1.0 NTU 100% of the time.

The Minnesota Department of Health has determined that one or more sources of your drinking water is susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-215-0800 or go online at www.health.state.mn.us/divs/eh/water/swp/swa/index.htm

If you have questions about the City of Minneapolis drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water, please call 612-661-4999.

## Lead and Drinking Water

Test results show water in the Minneapolis system to be in compliance for lead. You should know that infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flushing your tap for 30 seconds to two minutes before using the water can substantially reduce lead exposure. Additional information is available from the USEPA's Safe Drinking Water Hotline (800-426-4791).

## What You Need to Know about Drinking Water Regulations

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. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. 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)

## If You Have Special Health Requirements

Some people may be more vulnerable to contaminants in drinking water that the general population. Immuno-compromised people such as people with cancer undergoing chemotherapy, people 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).

# 2004 Laboratory Testing Results for Minneapolis Water

| Detected Substance | Units of Measure | MCL | MCLG | Level Found | Range of Detections | Typical Source in Drinking Water |
|---|---|---|---|---|---|---|
| Alpha Emitters (2002) | pCi/L | 15.4 | 0 | 0.4 | — | Erosion of natural deposits |
| Fluoride | ppm | 4.0 | 4.0 | 1.1 | 1.0-1.3 | Additive that promotes strong teeth; fertilizer and aluminum factory discharge. Erosion of natural deposits |
| Haloacetic Acids | ppb | 60 | 0 | 20.09 | 7.1-23.7 | By-product of drinking water disinfection |
| Nitrate/Nitrite (as Nitrogen) | ppm | 10 | 10 | 0.16 | — | Erosion of natural deposits; fertilizer runoff; leaching from septic tanks, sewage |
| TTHM (Total trihalomethanes) | ppb | 80 | 0 | 25.76 | 8.4-31.9 | By-product of drinking water disinfection |
| Total Coliform Bacteria | | present in 5% of monthly samples | 0 present | 1% | — | Naturally present in the environment |
| Turbidty | NTU | TT; 1.0 and < 0.3 | — | 99% of samples less than 0.3 | Highest reading 0.28 | Soil runoff |
| Chlorine | ppm | 4.0 (MRDL) | 4.0 (MRDLG) | 2.72 | 1.8-3.3 | Water additive used to control microbes |
| Copper | ppm | 90% of samples must be <1.3 ppm (AL) | — | 90% of samples <0.21 | 0 out 50 samples > 1.3 | Corrosion of home plumbing systems, erosion of natural deposits |
| Lead | ppb | 90% of samples must be <15 ppb (AL) | — | 90% of samples <7.0 | 4 out of 50 samples > 15.0 | Corrosion of home plumbing systems, erosion of natural deposits |
| Sodium | ppm | No USEPA limit set | — | 8.9 | — | Erosion of natural deposits |
| Sulfate | ppm | No USEPA limit set | — | 23.0 | — | Erosion of natural deposits |

**ppb**: parts per billion, or micrograms per liter of water **ppm**: parts per million or milligrams per liter of water
**pCi/L**: picocuries per liter, a measure of radioactivity **NTU**: Nephelometric Turbidity Units **ND**: Not Detected

# Watershed cont.

## Why is my watershed important?

Water moves. When it rains, the water that cannot be absorbed by plants and soil runs onto the streets and into the storm drain. This water is not treated to remove contaminants. Rather, it goes from the storm drain into a stormwater pond, or drains directly into the Mississippi River. Stormwater ponds serve two purposes. They provide added amenities to nearby residents and they naturally clean the runoff water before it reaches another larger water body.

### Have you ever?

Dropped a cigarette butt or litter on the ground?

Failed to pick up after your dog while out on a walk?

Over-watered your lawn after applying fertilizers/pesticides?

Disposed of used motor oil in the street, gutter or garbage?

Washed your car on the street?

When we have pollution on the street, in our yards, or thrown from our cars, --just like water-- they will move. Pollutants will eventually end up in the river or in our stormwater ponds. These actions pollute our neighborhoods, contaminate our rivers and area waterways and kill aquatic life.This is not good for the plants, animals and people that need the water to stay alive.

You can help protect your watershed and provide clean runoff back to the river, and it's easy.

### What can you do to prevent storm water pollution?

Mulch your lawn leaves and grass clippings instead of raking them into the street.

Put your garbage in the garbage can, not the storm drain.

Dispose of any oil, paint or other hazardous materials at an appropriate facility. Do not dump these wastes into the storm drain.

Wash your car on the lawn or at a carwash, instead of on the street. Soap going into the storm drain will hurt aquatic life.

Remember, storm drains lead straight to the river without treatment. Do your part to keep our waterways clean.

## What resources help restore our waters and keep our drinking water clean?

The Minneapolis Water Works (MWW) traces its beginnings to 1867, when a community-wide source of water was established to fight fires. The system expanded to include drinking water in 1872.

The Minneapolis Water Works is actively involved in several programs in a continuous effort to protect our valuable water sources.

**The River Defense Network (RDN)**
The RDN is a community-based spill prevention and response effort linking local, regional and state government, industry and trade groups. The central goal of the River Defense Network is to prevent spills that would contaminate the Mississippi River.

**Riverine Emergency Management Model Refinement (REMM)**
The REM is a computer model that calculates river transport times and the fate of spilled materials. This aids in response time and appropriate management techniques.

**Source Water Assessment**
The Minneapolis Water Works worked with the Department of Natural Resources (DNR) and Minnesota Department of Health (MDH) to complete a Source Water Assessment of the Mississippi River. This document provides basic information to public water suppliers and the general public regarding:

1) Where their drinking water comes from, and
2) The degree to which it may be impacted by potential sources of water contamination.

The goal of the assessment is to protect residents from adverse health effects associated with drinking water contamination by preventing contamination from entering the Mississippi River, its tributaries and cities' water supplies.

Information can be obtained on the MWW source water assessment from the MDH by calling 651-215-0800 or going online to www.health.state.mn.us/divs/eh/water/swp/swa/index.htm.