

# 2010 Water Quality Report



## Southwest Water Treatment Plant 2010 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
<b>Inorganic Chemicals - Annual Monitoring at Plant Finished Water Tap</b>								
Fluoride	9/10	ppm	4	4	1.11	0.63-1.11	no	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/10	ppm	10	10	0.26	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	6/08	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Disinfectant Residuals and Disinfection By-Products - Monitoring in Distribution System								
Total Trihalomethanes (TTHM)	Feb-Nov 2010	ppb	n/a	80	22.6	8.0-33.4	no	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	Feb-Nov 2010	ppb	n/a	60	9.9	3.7-18.4	no	By-product of drinking water disinfection
Disinfectant (Total Chlorine Residual)	Jan-Dec 2010	ppm	MRDLG 4	MRDL 4	0.63	0.49-0.79	no	Water additive used to control microbes

2010 Turbidity - Monitored every 4 hours at Plant Finished Water Tap				
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)		Violation Yes/No	Major Sources in Drinking Water
0.26 NTU	100%		no	Soil Runoff

\*Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

2010 Microbiological Contaminants - Monthly Monitoring in Distribution System				
Contaminant	MCLG	MCL	Highest Number Detected	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	in one month 0	Naturally present in the environment
E. coli or fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E. coli positive.	entire year 0	Human waste and animal fecal waste

2008 Lead and Copper Monitoring at Customers' Tap								
Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation Yes/No	Major Sources in Drinking Water
Lead	2008	ppb	0	15	5.0	1	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2008	ppm	1.3	1.3	.052	0	no	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

\*The 90th percentile value means 90% of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL, additional requirements must be met.

Regulated Contaminant	Treatment Technique	Running Annual Average	Monthly Ratio Range	Violation Yes/No	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month and because the level was low, there is no requirement for TOC removal.				Erosion of natural deposits

2010 Special Monitoring				
Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.80	Erosion of natural deposits

Collection and sampling result information in the table provided by DWSD Water Quality Division, MI. Semegen.

### What do these tables mean?

These tables show the results of our water quality analyses. Every regulated and unregulated detected contaminant in the water is listed here. The tables contain contaminant names, the highest detected levels, health goals, and the sources in drinking water and if a violation has occurred. Key definitions and/or explanations for each symbol used are listed to the right of the tables.

Unregulated contaminants are those for which the Environmental Protection Agency (EPA) has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. Beginning in July of 2008 - April 2009, the DWSD began monitoring quarterly for unregulated contaminants under the Unregulated Contaminant Monitoring Rule 2 (UCMR2). All the UCMR2 contaminants monitored on List 1 and List 2 in 2008 - 2009 were undetected.

### Definitions

**Maximum Contaminant Level Goal (MCLG):** level of contaminant in drinking water below which there is no known or expected risk to health.

**Maximum Contaminant Level (MCL):** highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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.

**Maximum Residual Disinfectant Level (MRDL):** 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.

**Parts per billion (ppb):** equivalent to micrograms per liter. A microgram = 1/1000 milligram.

**Parts per million (ppm):** equivalent to milligrams per liter. A milligram = 1/1000 gram.

**Nephelometric Turbidity Units (NTU):** Measures the cloudiness of water.

**Not Detected (ND)**

**Treatment Technique (TT):** required process intended to reduce the level of a contaminant in drinking water.

**Action Level (AL):** concentration of a contaminant which, if exceeded, triggers treatment or other requirements the water system must follow.

**Haloacetic Acids (HAA5):** total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.

**Total Trihalomethanes (TTHM):** Sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.

**Picocuries per liter (pCi/l):** measure of radioactivity.

n/a = not applicable

> = greater than

Dear Water Customer,

The City of Taylor Water and Sewer Department is pleased to share with you our 2010 Water Quality Report. The 1996 Federal Safe Drinking Water Act Amendments require that each community create an annual report to be distributed to each water customer within the community. This report is to inform all water customers of the City of Taylor about the quality of our drinking water and to share information on the Taylor Water System with our customers.

The City of Taylor Water and Sewer Department, directed by David E. Mackie, is responsible for the operation and maintenance of 308 miles of watermain and over 248 miles of sanitary sewer mains.

The City of Taylor is proud to announce to our water customers that we met or exceeded all federal and state standards for drinking water during 2010.

If you suspect a watermain break; notice a change in the look, smell or taste of your drinking water; or have a water or sewer emergency, please call (734) 374-1363. After regular business hours, on a holiday or a weekend, please call the Taylor Police Department at (734) 287-6611.

Anyone wishing to either discuss or learn more about water-related issues is welcome to attend the City of Taylor's five-member Water and Sewer Commission meeting held on the second Monday of each month at 6:00 p.m. at the Department of Public Works Building.

City of Taylor  
Water and Sewer Department  
25605 Northline Road  
Taylor, MI 48180

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## Water Customer

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**City Council**  
Cheryl Burke, *Chairwoman* • Jill Brandana, *Chairwoman Pro-Tem*  
John Delo • Jacklyn Molner • Rick Sollars • Dennis Stapleton • Suzanne Weycker

## Where does my water come from?

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, in the U.S. and parts of the Thames River, Little River, Turkey Creek and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage Department (DWSD), and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential 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 Detroit River source water intakes were determined to be highly susceptible to potential contamination. However, all four Detroit water treatment plants that use source water from the Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards. DWSD has initiated source water protection activities that include chemical containment, spill response, and a mercury reduction program. DWSD participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan.

## Important 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 at (800) 426-4791.

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 storm water 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 organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

**Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

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

## Lead

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. The City of Taylor Water and Sewer Department 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 <http://www.epa.gov/safewater/lead>.

## Drinking water notification

The City of Taylor received a violation of the drinking water standard in January 2011. Our water system detected the presence of coliform bacteria in the water supply.

## What should I do?

There is nothing you need to do at this time. Total coliform bacteria are generally not harmful themselves. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

## What happened? What is being done?

Two samples collected a full two weeks apart and from different sampling sites detected the presence of coliform bacteria. This violated a drinking water standard and we are required to inform all of our customers with a public notice. We DID NOT find any of these bacteria in our subsequent testing. Additional testing conducted in January and February 2011 indicated that the drinking water met ALL federal and state public health standards. No further samples have detected the presence of coliform bacteria since that time.

## Typical indoor household water use



## How much water does a typical household use?

An average residential household uses approximately 146,000 gallons of water per year. Around 70% of total household water use is indoors and 30% is dedicated to landscape irrigation.

## Odd/even watering days

The City of Taylor requests that all customers participate in odd/even watering days based on their address and numeric date. For example, if you have an address ending in an even number you would water on an even number day. Watering on odd/even days and off-peak hours helps in cost saving measures. A residential lawn requires one inch of water per week. Check with your sprinkler manufacturer for rate of discharge (gallons per minute).

## What are some possible causes for higher water usage?

When water consumption is higher than normal, we find that the water has been used on the property but in a way that was not expected. The following is a list of possible, though not definitive, causes for high water usage:

- Leaking toilets
- Poorly adjusted sprinkler systems that result in unnecessary irrigation. Often this is caused by power outages or sprinkler controllers that are not adjusted for changing conditions
- Over irrigation on slopes or outlying landscaping due to missing sprinkler heads or broken pipes
- Hose left on in yard by mistake
- Leaks from faucets or shower heads
- Malfunctioning water softeners
- Problem with sump pump
- Extra house guests - kids home from college or extra family staying over

## People with special health concerns

Some people may be more vulnerable to contaminants in drinking water than is 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 at (800) 426-4791.



If you would like to know more about this report, need additional copies or have other water-related issues, please contact the Taylor Water and Sewer Department:  
(734) 374-1363  
[www.cityoftaylor.com](http://www.cityoftaylor.com)

