

## Drinking Water and Health Information from the EPA

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. The EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the national Safe Drinking Water Hotline (800) 426-4791.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six 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. Des Moines Water Works uses a variety of strategies to keep the treated tap water below 10 ppm. These strategies include source water blending, and if necessary, removal of nitrate using an expensive treatment process known as ion exchange. DMWW treated water has not exceeded the 10 ppm standard since nitrate removal was implemented in 1992. If you are caring for an infant, you should ask for advice from your health care provider.

Many customers wish to know if bottled water is safer than regular tap water. Food and Drug Administration regulations establish limits for contaminants in bottled water that 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. Research repeatedly shows bottled water to be no safer than conventional tap water provided by public water systems in the U.S.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline.

### SAFE DRINKING WATER HOTLINE:

1-800-426-4791

[www.epa.gov/OGWDW](http://www.epa.gov/OGWDW)

## Sources of Drinking Water

DMWW obtains water for treatment from several different sources. The primary source of water is shallow groundwater under the influence of the Raccoon River. Groundwater collection systems are in place at both the Fleur and Maffitt Plants. The 3-mile-long groundwater collection system at the Fleur Drive Plant is known as the infiltration gallery, and Water Works Park was created in part to protect this resource from industrial contamination. The utility also obtains water directly from the Raccoon and Des Moines Rivers, and occasionally from Maffitt Reservoir.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, 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 the source water include:

**Microorganisms**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, livestock, and wildlife.

**Inorganic Substances**, such as salts and metals, which can occur naturally or come from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and Herbicides**, which may come from agriculture, urban stormwater runoff, and residential uses.

**Organic chemicals**, including synthetic and volatile organic chemicals, which are industrial and petroleum process byproducts and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive Contaminants**, which can occur naturally or result from oil and gas production and mining activities.

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# Consumer Confidence Report

A publication on quality water and quality service presented by  
**DES MOINES WATER WORKS**

In order to ensure that tap water is safe to drink, the Environmental Protection Agency prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. This annual report is your guide to see how water provided by the Des Moines Water Works (DMWW) compares to standards set by the Safe Drinking Water Act.

DMWW employs a three-pronged strategy to make sure customers receive a continuous supply of safe drinking water:

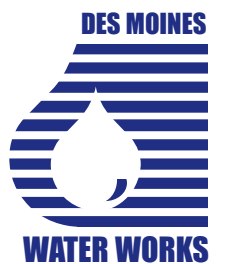
- **Keep it Clean:** Prevent Source Contamination
- **Make it Safe:** Remove harmful (natural and man-made) contamination through water treatment
- **Prove it's Safe:** Zealously monitor and protect the treated water

Keeping the source water (the Raccoon and Des Moines Rivers) clean is a huge challenge. Like many other Iowa streams, the Raccoon and Des Moines are under the enormous influence of human activity. Neither river has resembled its natural state, in either appearance or water quality, for over a century. The primary impairments are excess nutrient (nitrate-nitrogen) and bacteria levels.

DMWW's laboratory maintains a rigorous program of watershed monitoring, so that sources of contamination can be identified.



Customers can help by supporting practices and initiatives that improve water quality at both the state and local levels.



## Public Meeting & Utility Contact Information

- **ANKENY**  
**Ankeny City Council**  
1st and 3rd Monday of each month at 5:30 p.m.  
410 West 1st Street · Ankeny, Iowa 50023  
**Customer Service**  
220 W. 1st St. · Ankeny, Iowa 50023  
Phone: (515) 283-8700 · Fax: (515) 283-8727  
E-mail: [jmckenna@ci.ankeny.ia.us](mailto:jmckenna@ci.ankeny.ia.us)
- **BERWICK**  
**Berwick City Council**  
1st Monday of each month  
6855 NE Berwick Drive · Ankeny, Iowa 50021  
**Fred Tomlinson**  
Phone: (515) 262-4378 · Fax: (515) 262-1342
- **BONDURANT**  
**Bondurant City Council**  
1st and 3rd Monday of each month at 6:00 p.m. Bondurant City Hall · 200 2nd NE Bondurant, Iowa 50035  
**Patrick F. Collison**  
Phone: (515) 971-6856 · Fax: (515) 967-5732
- **CLIVE**  
**Clive City Council**  
1st, 3rd, & 5th\* Thursdays of each month (\*5 week months)  
Clive City Hall · 1900 NW 114th St. · Clive, Iowa 50325  
**Bart Weller, Director of Public Works**  
9289 Swanson Blvd. · Clive, Iowa 50325  
Phone: (515) 223-6231 · Fax: (515) 223-6013  
E-mail: [bweller@cityofclive.com](mailto:bweller@cityofclive.com)
- **CUMMING**  
**Cumming City Council**  
2nd and 4th Monday each month  
City Hall · Cumming, Iowa 50061  
**Kathie Hungerford**  
P.O. Box 100 · Cumming, Iowa 50061  
Phone: (515) 981-9214 · Fax: (515) 981-4981
- **DES MOINES**  
**Board of Water Works Trustees**  
4th Tuesday each month at 3:30 p.m.  
Des Moines Water Works  
2201 George Flagg Parkway · Des Moines, Iowa 50321  
**Customer Service**  
Phone: (515) 283-8700 · Fax: (515) 283-8727  
E-mail: [customerservice@dmww.com](mailto:customerservice@dmww.com)
- **EARLHAM**  
**Earlham City Council**  
2nd Monday of each month at 7:00 p.m.  
Earlham City Hall · Earlham, Iowa 50072  
**Bruce Koboldt, Public Works Superintendent**  
P.O. Box 518 · Earlham, Iowa 50072  
Phone: (515) 758-2157 or (515) 758-2281  
Fax: (515) 758-2710
- **JOHNSTON**  
**Johnston City Council**  
1st and 3rd Monday of each month at 7:00 p.m.  
City Hall · 6221 Merle Hay Road · Johnston, Iowa 50131  
**Lori Eden**  
P.O. Box 410 · Johnston, Iowa 50131-0410  
Phone: (515) 278-0822 · Fax: (515) 727-8092  
E-mail: [leden@ci.johnston.ia.us](mailto:leden@ci.johnston.ia.us)
- **NEW VIRGINIA**  
**New Virginia City Council**  
1st Saturday of each month at 8:00 a.m.  
Fire Station meeting room · New Virginia, IA 50210  
**Brent Baughman**  
305 Main Street, P.O. Box 302 · New Virginia, IA 50210  
Phone: (641) 449-3379 · Fax: (641) 449-3310
- **NORWALK**  
**Norwalk City Council**  
1st and 3rd Thursday of each month at 7:00 p.m.  
705 North Avenue · Norwalk, Iowa 50211  
**Dean Yordi, Community Services Director**  
Phone: (515) 981-0228 · Fax: (515) 981-0933  
E-mail: [deanyordi@ci.norwalk.ia.us](mailto:deanyordi@ci.norwalk.ia.us)
- **PLEASANT HILL**  
**Pleasant Hill City Council**  
2nd and 4th Tuesday of each month at 6:30 p.m.  
Pleasant Hill City Hall  
5151 Maple Drive · Pleasant Hill, Iowa 50317  
**Gary Patterson, Public Works Director**  
Phone: (515) 262-9368 · Fax: (515) 262-9570  
**DMWW Customer Service:** 283-8700
- **POLK COUNTY RURAL WATER DISTRICT #1**  
Annual Meeting in January each year · Call for date  
660 NW 66th Avenue, Suite 2 · Des Moines, Iowa 50313  
**Clate VanderPool**  
Phone: (515) 289-2643
- **Regency Manor**  
**Marsha Oliver**  
Call (515) 770-1414 for Meeting Times.
- **RUNNELLS**  
**Runnells City Council**  
2nd Tuesday of each month at 7:00 p.m. Runnells City Hall  
**Linda Northway, City Clerk** Phone: (515) 966-2042  
**DMWW Customer Service:** (515) 283-8700
- **ST. CHARLES**  
**St. Charles City Council**  
1st Monday of each month at 7:00 p.m.  
St. Charles City Hall  
113 S. Lumber St. · St. Charles, Iowa 50240  
**Randy Gray, Water Superintendent**  
Phone: (641) 396-2545 · Fax: (641) 396-2545  
E-mail: [stccity@netins.net](mailto:stccity@netins.net)
- **URBANDALE**  
**Water Board of Trustees**  
Meets monthly · Call 278-3940 for information  
Urbandale Water Department  
3720 86th Street · Urbandale, Iowa 50322  
**Customer Service**  
Phone: (515) 278-3940 · Fax: (515) 278-3944  
E-mail: [waterdept@urbandale.org](mailto:waterdept@urbandale.org)
- **WARREN WATER DISTRICT**  
**Board of Directors**  
3rd Monday each month at 7:00 p.m.  
Warren Water District Office  
1204 East 2nd Avenue · Indianola, Iowa 50125  
**Peggy Crabbs, Systems Manager**  
Phone: (515) 962-1200 · Fax: (515) 962-9328  
E-mail: [pcrabbs@warrenwaterdistrict.com](mailto:pcrabbs@warrenwaterdistrict.com)
- **WAUKEE**  
**Waukee City Council**  
1st and 3rd Monday each month at 7:00 p.m.  
Waukee City Hall · 230 Highway 6 · Waukee, Iowa 50263  
**John R. Gibson, Director of Public Works**  
Phone: (515) 987-4363 · Fax: (515) 987-3979  
E-mail: [jgibson@waukee.org](mailto:jgibson@waukee.org)
- **WINDSOR HEIGHTS**  
**Windsor Heights City Council**  
1st and 3rd Monday each month at 5:00 p.m.  
Windsor Heights City Hall  
1133 66th Street · Windsor Heights, Iowa 50311  
**DMWW Customer Service:** Phone: (515) 283-8700
- **XENIA RURAL WATER DISTRICT**  
**Board of Directors**  
Thursday of 3rd full week of each month  
2398 141st Street · Bouton, Iowa 50039  
**Dave Modlin**  
Phone: (515) 676-2117 · Fax: (515) 676-2208  
E-mail: [dave@xeniamwater.org](mailto:dave@xeniamwater.org)

Des Moines Water Works completed a Source Water Assessment in 2001. To obtain a copy of the SWA, visit our website at [www.dmww.com](http://www.dmww.com), or call (515) 283-8700 to request a printed copy.



# WATER QUALITY REPORT 2005

Before water can be delivered to your home, it must first be analyzed by certified laboratories at DMWW's Fleur Drive Plant and at the University of Iowa Hygienic Laboratory in Iowa City. Results for 2005 in this report include those for samples taken as water leaves DMWW's two treatment plants, and from samples obtained from the various water distribution systems supplied with water by DMWW. The Maffitt Plant serves southwest Des Moines; parts of the Xenia and Warren Rural Water Systems; Waukee; and the parts of West Des Moines, Clive, and Urbandale west of I-35. All other areas receive water from the Fleur Drive Plant. Some test results shown in the table are from samples analyzed prior to 2005. This is because annual monitoring is not required for all contaminants, and the data represents the last time a substance was detected.

## Water Treatment Plant Monitoring

	Year Tested	Units	MCL	MCLG	Fleur Drive Treatment Plant		Maffitt Reservoir Treatment Plant		Typical Source of Substance
					Level Found	Range of Detections	Level Found	Range of Detections	
<b>Organic Substances</b>									
Metolachlor	2001	µg/L	-	-	-	-	1.6	-	Runoff from herbicide use on row crops
<b>Water clarity</b>									
Turbidity	2005	NTU	TT	-	0.24	0.02-0.24	0.12	0.0-0.12	Soil runoff
<b>Inorganic Substances</b>									
Nitrate as Nitrogen	2005	mg/L	10	10	9.97	0.35-9.97	9.92	0.13-9.92	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite as Nitrogen	2005	mg/L	1	1	0.07	ND-0.07	ND	ND	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride	2005	mg/L	4	4	1.61	0.48-1.61	1.33	0.13-1.33	Additive for strong teeth; erosion of natural deposits; fertilizer
Sodium	2005	mg/L	-	-	48.6	12.7-48.6	21.4	8.23-21.4	Erosion of natural deposits
Sulfate	2005	mg/L	-	-	111	35.5-111	76.9	27.8-76.9	Erosion of natural deposits
<b>Radiological Substances</b>									
Combined Radium	2003	pCi/L	5	0	0.7	-	-	-	Erosion of natural deposits
Alpha Emitters	2001	pCi/L	15	0	0.5	-	-	-	Erosion of natural deposits

## Distribution System Monitoring

Once the water leaves the water treatment facilities, it is regularly monitored throughout the numerous distribution systems served by DMWW for disinfectant, disinfectant byproducts, bacteria, lead and copper.

### System

System	Total Trihalomethanes Byproducts of chlorination. Units: ug/L. MCL = 80 ug/L MCLG = no limit set		Haloacetic Acids (HAA5) Byproducts of chlorination. Units: ug/L. MCL = 60 ug/L MCLG = no limit set		Lead From plumbing corrosion. Units: ug/L. 90% of all samples must be below Action Level of 15 ug/l	Copper From plumbing corrosion. Units: mg/L. 90% of all samples must be below Action Level of 1.3 mg/l	Coliform Bacteria Naturally present in the environment. Units: positive samples. No more than 5% of monthly samples can be positive		Chlorine Disinfectant Added to prevent bacterial growth. Units: mg/L. Maximum limit for annual average: 4.0 mg/L (See MRDL and MRDLG in definitions below)	
	Level Found	Range of Detections	Level Found	Range of Detections	90% of samples below this level	90% of samples below this level	Monthly Samples	Positive Samples	Running Annual Ave.	Range
Des Moines-Fleur*	50	43-56	13	8-14	ND	0.025	120	1	0.56	0.47-0.75
Des Moines-Maffitt	34	24-46	13	8-15	ND	0.025	120	1	0.56	0.47-0.75
Ankeny	63	40-89	13	9-15	ND	ND	30	1	0.59	0.51-0.69
Ankeny Aquifer Storage & Recovery	69	41-83	11	ND-18	NA	NA	NA	NA	0.59	0.51-0.69
Berwick	56	44-66	ND	ND	ND	0.024	1	0	0.26	0.13-0.37
Bondurant	44	35-52	16	13-23	ND	0.014	2	0	1.40	0.59-2.04
Clive	51	38-64	10	7-14	ND	0.022	10	0	0.50	0.38-0.64
Cumming	62	NA	ND	NA	4.0	0.05	1	0	0.22	0.14-0.33
Earlham	58	45-81	12	8-16	ND	ND	2	0	0.91	0.50-1.52
Johnston	53	50-56	10	ND-14	6.0	0.010	10	0	0.28	0.19-0.42
New Virginia	95	69-128	20	13-31	ND	ND	1	0	0.71	0.50-0.97
Norwalk	53	46-65	ND	ND	2.0	0.050	8	0	0.83	0.80-0.85
Polk County Rural Water #1	46	31-60	9	ND-9	ND	0.023	1	0	0.30	0.22-0.45
Regency Manor	50	38-71	ND	ND	ND	ND	1	0	0.34	0.17-0.64
Runnells	53	NA	ND	NA	3.0	0.10	1	0	0.54	0.10-0.90
SEP Rural Water North	65	55-73	18	12-23	ND	0.042	9	0	0.99	0.34-1.73
SEP Rural Water South	59	55-67	ND	ND	ND	0.042	9	0	0.36	0.24-0.43
St. Charles	95	55-115	12	8-17	ND	ND	1	0	1.46	0.80-1.96
Urbandale	55	48-60	10	6-13	6.3	ND	30	0	0.58	0.48-0.68
Warren Rural Water-Fleur	76	55-100	9	8-12	12.3	0.025	19	0	0.66	0.40-1.08
Warren Rural Water-Maffitt	61	50-74	9	6-10	12.3	0.025	19	0	0.66	0.40-1.08
Waukee	65	51-74	9	7-13	8.0	0.024	2	0	0.40	0.35-0.63
Xenia Rural Water	64	33-137	12	18-28	10.0	0.040	14	0	1.90	1.37-2.12

\*Includes Windsor Heights and Pleasant Hill

## Definition of Terms

**Level Found** is the highest amount found in the water or the average of all samples analyzed, depending on the regulation. If multiple samples were tested in 2005, the lowest and highest detected values are listed under **Range of Detections**.

**MCL** is the maximum contaminant level, the highest level of a substance allowed in drinking water.

**MCLG** is the MCL Goal, 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 treatment processes.

**MRDL** is 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** is the level of 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.

**Action Level** is the concentration of a contaminant that, if exceeded, triggers a treatment or other requirement that a water system must follow.

**TT** is treatment technology. Certain treatment processes are required to reduce the level of turbidity in the drinking water. Turbidity must not ever exceed 1 NTU, and must be less than 0.3 NTU 95% of the time.

**mg/L** is milligrams per liter, or parts per million. **ug/L** is micrograms per liter, or parts per billion.

**NTU** is nephelometric turbidity units. **pCi/L** is picocuries per liter, a measure of radioactivity.

**ND** is Not Detected. **NA** is not applicable.

## 2005 Total Organic Carbon Lab Results

Treatment Plant	Year Tested	% Removal From Source Water	Removal Requirements Met
Fleur Drive	2005	20.5-67.3	Yes
Maffitt Reservoir	2005	17.2-38.1	Yes

## Violation Report

**City of Clive:** Monitoring violation for October, failure to collect required bacteria samples.

**Regency Manor:** No certified operator for December; failure to deliver 2005 Consumer Confidence Report.

**New Virginia, St. Charles, Xenia, and SEP North System:** All systems exceeded the MCL for Total Trihalomethanes during 2005. However, changes were made to the SEP North system, and the system is now in compliance with this regulation. Trihalomethanes (THMs) are a class of organic compounds formed when chlorine reacts with naturally-occurring organic matter found in source water. The health effects associated with prolonged exposure to high levels of THMs include problems with liver, kidneys, or central nervous system, and an increased risk of cancer. Corrective actions include public notice and education, and increased monitoring of chlorine added to the water of these systems.

