Directions: Find	the healthy river by us	sing a light blue crayo	n or marker to shade	in all of the squares	containing ways to ke	ep our watersheds ar	nd rivers clean.
Do not dump anything down storm sewers - they lead directly to our rivers	1	Clean up pet waste, especially when it is on paved surfaces.	Take used motor oil to an automotive shop for recycling.	Sweep sidewalks and driveways instead of cleaning them by hosing them down.		Put hay or tarps over dirt at constructions sites to prevent erosion and runoff.	Do you see the "river?" Now, fill in the blanks below to
Put fertilizer on only when no rain is predicted.	Look the other way if you see someone dumping something hazardous into the water.	Use lots of fertilizer - more is better!	When enjoying parks, remember to "Leave no trace."	Recycle #1 and #2 plastics.	Flush household hazardous chemicals down the toilet.	Plant grass, trees and shrubs to hold dirt in place and prevent erosion.	find a special watershed message. Begin on the bottom row, go
Keep cars in good repair so they do not leak oil.	l' ,	Dispose of yard waste by burning it in a barrel or pile.	Take leftover household hazardous materials to the Regional Collection Center in Bondurant.	Weed your garden by hand instead of using chemicals.		Put recyclables in your CurbIt! bin for pickup.	left to right, placing the blue letter from each of your blue
Get rid of extra antifreeze	Call your garbage handler	Leave litter in your drive-	Wash your car on the lawn			When watering your yard,	shaded boxes
by dumping it on the ground.	to pick up old appliances	way so water will pick it up next time it rains. N	rather than the driveway or street to avoid runoff.	construction sites to prevent dirt from getting washed into storm sewers and the rivers.	overboard since there are no garbage cans on lakes, rivers, or streams.	make sure you are watering the lawn and not the streets, sidewalks, or driveway.	on the lines below. Continue in this manner, traveling up the "watershed"
Use sand or sawdust on icy sidewalks and driveways instead of salt.	,	Put as many paved sur- faces as you can on your property.	Choose more porous materials, like gravel and woodchips rather than concrete when planning your landscaping.	Use chemical pesticides sparingly, or use natural pesticides, such as ladybugs.	If you have a septic tank, check it yearly for leaks.	If your car leaks oil, sprinkle cat litter on the spill to soak it up, then sweep up the litter and put it in the trash can.	from left to right until your answer is revealed.

Public Meeting Information

b. drips

c. cleans

e. lake

f. river

ANKENY

Ankeny City Council • 1st and 3rd Monday of each month at 5:00 p.m.

410 West 1st Street • Ankeny, Iowa 50021 **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

Clive City Council • 1st, 3rd, & 5th* Thursday of each month (*5 week months)

Clive City Hall • 1900 NW 114th St. • Clive, Iowa 50325

Cumming City Council • 2nd and 4th Monday each month City Hall • Cumming, Iowa 50061

DES MOINES

Board of Water Works Trustees • 4th Tuesday each month at 9:00 a.m.

Des Moines Water Works • 2201 Valley Drive • Des Moines, Iowa 50321

EARLHAM

Earlham City Council • 2nd Monday of each month at 7:00 p.m.

Earlham City Hall • Earlham, Iowa 50072

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

New Virginia City Council • 1st Saturday of each month at 8:00 a.m.

Fire Station meeting room

NORWALK Norwalk City Council • 1st and 3rd Thursday of each month at 7:00 p.m.

705 North Avenue • Norwalk, Iowa 50211

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

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

SOUTHEAST POLK RURAL WATER DISTRICT Board of Directors • 3rd Wednesday of each month • Contact office for time

6540 NE 12th Avenue • Altoona, Iowa 50009

URBANDALE Water Board of Trustees • Meets monthly • Call 278-3940 for information

Urbandale Water Department • 3720 86th Street • Urbandale, Iowa 50322

Board of Directors • 3rd Monday each month at 7:00 p.m. Warren Water Office • 1204 East 2nd Avenue • Indianola, Iowa 50125

Waukee City Council • 1st and 3rd Monday each month at 7:00 p.m.

Waukee City Hall • 230 Highway 6 • Waukee, Iowa 50263

WINDSOR HEIGHTS

/indsor Heights City Council • 1st and 3rd Monday each month at 4 p.m. Windsor Heights City Hall • 1133 66th Street • Windsor Heights, Iowa 50311

XENIA RURAL WATER DISTRICT - Southwest & Woodward

Board of Directors • Thursday of 3rd full week of each month

2398 141st Street • Bouton, Iowa 50039

City of Ankeny: Customer Service

210 SW Ankeny Boulevard, Ankeny, Iowa 50021 Phone: (515) 283-8700 • Fax: (515) 283-8727 E-mail: jmckenna@ci.ankeny.ia.us

City of Bondurant: Patrick F. Collison 200 2nd NE, P.O. Box 37, Bondurant, Iowa 50035 Phone: (515) 971-6856 • Fax: (515) 967-5732



Phone: (515) 223-6231 • Fax: (515) 223-6013 • E-mail: bweller@ci.clive.ia.us

• City of Cumming: Kathie Hungerford P.O. Box 100, Cumming, Iowa 50061

Phone: (515) 981-9214 • Fax: (515) 981-4981

Des Moines Water Works: Customer Service

2201 Valley Drive, Des Moines, Iowa 50321

Phone: (515) 283-8700 • Fax: (515) 283-8727 • E-mail: information@dmww.com

City of Earlham: Bruce Koboldt, Public Works Superintendent P.O. Box 518, Earlham, Iowa 50072

Phone: (515) 758-2157 or (515) 758-2881 • Fax: (515) 758-2710

Johnston Water Department: Jerry R. Meyers or Donna Kluss

P.O. Box 410, Johnston, Iowa 50131-0410

Phone: (515) 278-0822 • Fax: (515) 727-8092 • E-mail: dkluss@ci.johnston.ia.us

• City of New Virginia: Brent Baughman

305 Main Street, P.O. Box 302, New Virginia, IA 50210 Phone: (641) 449-3379 • Fax: (641) 449-3310

City of Norwalk: Dean Yordi, Community Services Director

705 North Avenue, Norwalk, Iowa 50211

Phone: (515) 981-0228 • Fax: (515) 981-0933 • E-mail: deanyordi@ci.norwalk.ia.us

· City of Pleasant Hill: Gary Patterson, Public Works Director 5151 Maple Drive, Suite 1, Pleasant Hill, Iowa 50317-8494

Phone: (515) 262-9368 • Fax: (515) 262-9570

 Polk County Rural Water District #1: C. VanderPool 660 NW 66th Street, Des Moines, Iowa 50313

Phone: (515) 289-2643

• Southeast Polk Rural Water District: Shirley J. Bos, General Manager 6540 NE 12th Avenue, Altoona, Iowa 50009

Phone: (515) 262-8581 • Fax: (515) 262-4536 • E-mail: seph20@prairinet.net • Urbandale Water Department: Customer Service

3720 86th Street, Urbandale, Iowa 50322 Phone: (515) 278-3940 • Fax: (515) 278-3944 • E-mail: waterdept@urbandale.org

· Warren Water District: Peggy Crabbs, Systems Manager 1204 East 2nd Avenue, Indianola, Iowa 50125

Phone: (515) 962-1200 • Fax: (515) 962-9328 · City of Waukee: John R. Gibson, Director of Public Works

230 Highway 6. Waukee, Iowa 50263 Phone: (515) 987-4363 • Fax: (515) 987-3979 • E-mail: gibsonjon@aol.com

• City of Windsor Heights: Customer Service 1133 66th Street, Windsor Heights, Iowa 50311 Phone: (515) 283-8700 • Fax: (515) 283-8727

Page 4 • 2002 Consumer Confidence Report

• Xenia Rural Water District - Southwest & Woodward: Dave Modlin 2398 141st Street, P.O. Box 39, Bouton, Iowa 50039-0039

Phone: (515) 676-2117 • Fax: (515) 676-2208 • E-mail: dave@xeniawater.org

Des Moines Water Works

City of Ankeny • City of Bondurant • City of Clive Water Department • City of Cumming Des Moines Water Works • City of Earlham • Johnston Water Department City of New Virginia • City of Norwalk • City of Pleasant Hill Polk County Rural Water District #1 • SE Polk Rural Water District Urbandale Water Department • Warren Water District • City of Waukee City of Windsor Heights • Xenia Rural Water District - Southwest & Woodward

arned not to

swim in waters

amination.

due to e-coli con-

Almost monthly

community and

hroughout lowa

citizens of our

nave seen or

heard news sto-

ries about harmful

contaminant spills

that have killed or

Quality Water • Quality Service

2002 Consumer Confidence Report

Treating the Present, Assessing the Future

In 2001, DMWW experienced record levels of nitrate in and non-point source pollution can be prevented by the Des Moines and Raccoon Rivers, continuing the 27vear upward trend of nitrate contamination in our source waters. In the past several years, a number of lowa beaches have been closed and lowans have been



endangered fish and other river wildlife. The quality of our source water also has a direct impact on the cost of treating these waters to provide safe, quality drinking water.

DMWW recently completed a source water assessment - a detailed report determining source water susceptibility to contamination and providing for prevention of future contamination To obtain a copy of DMWW's Source

Protecting our water resources is imperative to the quality of life in lowa. In addition, pre-

vention is the best way to improve DMWW's ability to provide quality drinking water at a reasonable cost.

Source water protection is a complex and complicated issue, but the goal of cleaner, healthier source waters in lowa, particularly in the Des Moines and Raccoon River watersheds, is still within our grasp. Citizen action is the

Source Water and Contaminants

Source water is the body of water that a public drinking 5. Environmental clean-up sites (Brownfields) water supplier uses to obtain its raw water supply for treatment. The two main types of source water are surface water, such as rivers, lakes, and reservoirs, and ground water. DMWW uses surface water from the Des Moines and Raccoon Rivers.

"For agricultural producers to change, they have to be able to understand the impact and their role within the watershed.'

National Soil Tilth Laboratory

tamination due to the rainwater that drains to rivers and streams, carrying any soil. trash, and pollutants it picks up along the way. The most obvious sources of contamination are called point source d pollution - sources that can be pinpointed to one location, such as airports or factories.

Surface water supplies are

inherently susceptible to con-

The other type of contamination, called non-point source is difficult to identify, measure, isolate and control. These sources can include erosion, agricultural runoff, and failing septic systems. In lowa, a significant source of non-point source contamination is row crop agriculture.

It is important to understand that both point source

developing and employing good management practices (see box below).

D M W W's Source Water Assessment

The Safe Drinking Water Act of 1996 required that all water suppliers identify the topographic area of the entire watershed upstream of the intake structure. A contaminant inventory that identified the possible sources of contaminants in the watershed. and assess the susceptibility

of contamination in the watershed was then compiled. After compiling and analyzing all the information gath-

ered during the project, a final report, called the "Source Water Assessment" (SWA), was compiled. DMWW concluded that there are numerous potential sources of contamination within our watersheds. From this information. a list of the top 10 sources of contaminants with the highest potential to negative-

was created. The reason these 10 potential sources are contained Vater Assessment, visit our website at in this list is that a www.dmww.com, or call DMWW at (515) release of contami-

ly impact our source water

nants from these sources would severely impact 283-8700 to request a printed copy. both our source waters and potentially our drinking water. It would then become DMWW's responsibility to effectively remove the contaminant(s) from the water,

> despite the cost to DMWW or our customers. DMWW's top 10 contaminant source list includes:

- 1. National pipelines (petroleum)
- Non-point source pollution (row crops, soil erosion)

6. Solid waste disposal facilities (land fills)

You can make a difference. . . at home & in your community!

♦ Do not dump hazardous household chemicals, such as fertilizer, oil-based

Collection Center in Bondurant (515-967-5512) for safe disposal, or use envi-

♦ Recycle your newspapers, magazines, milk jugs, juice bottles, metal cans,

Plant grass, trees, and shrubs to prevent soil from blowing or washing

away. Bag leaves and grass clippings for compost collection to keep them

♦ Do not dump chemicals or anything else down storm sewers - most lead

♦ Keep your vehicles in good condition to prevent oil and antifreeze leaks

Do not litter! You can also volunteer to help clean up area parks, along river

• Talk to your legislators at the local and state level. Their support is impera-

tive for implementing changes, as well as supplying funding for watershed

Establish or restore wetlands, especially in agricultural areas, to prevent

from entering storm sewers from the street or your driveway.

clear glass, and anything else possible to reduce the quantity of garbage you

paint, or antifreeze, down the drain. Take them to the MWA's Regional

- Agricultural facilities/animal feed lots/confinements 4. Wastewater treatment facilities

ronmentally safe cleaning products

from washing into storm sewers.

banks, or near lakes and streams.

send to the landfill.

straight to our rivers.

protection programs.

"Just because lowa has a predominance of farm land does not mean urban residents can ignore their contributions to the pollution of the watershed."

> County Extension Director ISU Extension Polk County els seasonally. DMWW is also diligently

7. National and non-national priority site (clean up site)

- 8. Pesticide/fertilizer facilities
- 9. Airports
- 10. Business and industry discharges.

The list was developed to help determine where to focus future management efforts. While DMWW is concerned with all the categories in the top 10 list, these are not the only concerns with regard to source water quality. The types of contaminants we currently find in our source water are bacterial or microbial, with high nitrate lev-

keeping abreast of

new reports indicating a presence of pharmaceuticals, such as hormonal disrupters and antimicrobials, in our source waters.

The Future

Armed with the information DMWW has detailed in the SWA, the

citizens of the Des Moines metropolitan area, as well as the citi-

zens living throughout the Des Moines and Raccoon River watersheds, can take action to help protect and improve our source water

quality. This is beneficial to everyone receiving our drinking water, as well as the thousands receiving drinking water from other utilities drawing from the same

sources. In addition, it will improve recreation and leisure opportunities, such as fishing, swimming, and boating, as well as ensuring quality of protection efforts and volunteer opportu

Most importantly, it will allow DMWW to continue providing

life and a better

U.S. Department of Agriculture

Jerry Hatfield 2150 Pammel Drive Ames, Iowa 50011-4420 Phone: (515) 294-5723

Barbara Hug

5201 NE 14th Street

Iowa Environmental Council

711 East Locust Des Moines, Iowa 50309 Phone: (515) 244-1194 E-mail:iecmail@earthweshare.org www.earthweshare.org

502 East 9th Street Des Moines, Iowa 50319 Phone: (515) 281-3252 E-Mail: richard.leopold@dnr.state.ia.us

Urbandale, Iowa 50322 Phone: 1-800-797-4322 E-mail: wolf@acwa-rrws.org

Page 1 • 2002 Consumer Confidence Report

chemical runoff from entering rivers, lakes, and streams.

How To Get With The Flow For more information about watershed

ties in our community and the state of future for our families.

National Soil Tilth Laboratory

E-mail: hatfield@nstl.gov **ISU Extension Polk County**

Des Moines, Iowa 50313-2005

Phone: (515) 261-4204 E-mail: bhug@iastate.edu sion.iastate.edu/polk/wate

> IOWATER Rich Leopold

www.iowater.net **Agriculture's Clean Water Alliance** 4536 NW 114th Street



Des Moines Water Works

2001 Water Quality

SUBSTANCE	HIGHES'	T LEVEL ED (MCL)	DMWW F USIN DES MOINE WAT	NG ES RIVER	DMWW F USIN RACCOON WATI	IG N RIVER ER	DMWW RA USING TREATMENT AT MAFFITT RE	PLANT ESERVOIR	MA DET LI	MWW XIMUM ECTED EVEL	EPA MCLG (EPA GOAL)	SOURCES OF CONTAMINANT
Turbidity	0.5	NTU	nd-0.24	NTU	nd-0.17		LOGICAL C nd-0.24	_	0.24	NTU	N/A	Soil Runoff
Gross Alpha Excluding Uranium Strontium-90	15.0 N/A	pCi/L	N/A nd-0.5	pCi/L	0.5 N/A	pCi/L -INORG	11.1 N/A	pCi/L TAMINA	11.1 0.5	pCi/L pCi/L	N/A N/A	Erosion of Natural Deposits Erosion of Natural Deposits
Fluoride Nitrate (as N) Sodium Sulfate	4.0 10.0 unregu unregu		0.20-1.2 1.8-9.3 10.0-51.0 27.0-90.0	mg/L mg/L mg/L mg/L	0.19-1.3 1.7-7.2 14.0-20.0 39.0-75.0	mg/L mg/L mg/L mg/L	0.29-1.2 1.2-9.4 9.1-24.0 30.0-74.0	mg/L mg/L mg/L mg/L mg/L AMINAN	1.3 9.4 51.0 90.0	mg/L mg/L mg/L mg/L	4.0 mg/L 10.0 mg/L unregulated unregulated	Additive to Promote Strong Teeth Runoff from Fertilizer Use Erosion of Natural Deposits Erosion of Natural Deposits
Atrazine Metolachlor Total Haloacetic Acids (HAA5)	3.0 70.0*	μg/L μg/L	N/A N/A N/A	μg/L μg/L	nd nd N/A	-ORGA μg/L μg/L	0.46 1.6 8.0-11.0	AMINAN μg/L μg/L μg/L		μg/L μg/L μg/L	3.0 μg/L N/A N/A	Runoff from Herbicide Use Runoff from Herbicide Use By-product of Drinking Water Disinfection
Total Trihalomethane	100.0	μg/L	34.0-55.0	μg/L	47.0	μg/L	14.0-41.0	μg/L	55.0	μg/L	0 μg/L	By-product of Chlorine Disinfection

UTILITY	СОРР	ER ACTION LEVEL		PERCENTILE**		TION LEVEL		PERCENTILE**	# LEAD SAMPLES ABOVE AL	SOURCES OF CONTAMINANT
Ankeny	1.3	mg/L	——€OP: 0.036	PER AND mg/L	LEAD - 15.0	regarace	16.2	tomer Ta	8 of 61 samples	Corrosion of Home Plumbing
Bondurant (see note below)	1.3	mg/L	0.626¹	mg/L	15.0	μg/L μg/L	7.0 ¹	μg/L μg/L	0 of 10 samples	Corrosion of Home Plumbing
Clive	1.3		0.032	mg/L	15.0		0		0 of 33 samples	Corrosion of Home Plumbing
		mg/L	0.032		15.0	μg/L	3.0	μg/L		Corrosion of Home Plumbing
Cumming	1.3	mg/L	U	mg/L		μg/L		μg/L	0 of 5 samples	
Des Moines Water Works	1.3	mg/L	nd²	mg/L	15.0	μg/L	10.0 ²	μg/L	5 of 64 samples	Corrosion of Home Plumbing
Earlham	1.3	mg/L	<0.01	mg/L	15.0	μg/L	<1.0	μg/L	0 of 10 samples	Corrosion of Home Plumbing
Johnston	1.3	mg/L	0.0073	mg/L	15.0	μg/L	0.02 ³	μg/L	1 of 40 samples	Corrosion of Home Plumbing
New Virginia	1.3	mg/L	< 0.020	mg/L	15.0	μg/L	<6.0	μg/L	0 of 5 samples	Corrosion of Home Plumbing
Norwalk	1.3	mg/L	0.05	mg/L	15.0	μg/L	2.0	μg/L	0 of 20 samples	Corrosion of Home Plumbing
Pleasant Hill	1.3	mg/L	<0.012	mg/L	15.0	μg/L	<1.02	μg/L	0 of 20 samples	Corrosion of Home Plumbing
Polk Cty Rural WD #1	1.3	mg/L	nd²	mg/L	15.0	μg/L	13.0 ²	μg/L	1 of 10 samples	Corrosion of Home Plumbing
SE Polk Rural Water	1.3	mg/L	0.036	mg/L	15.0	μg/L	<5.0	μg/L	1 of 12 samples	Corrosion of Home Plumbing
Urbandale	1.3	mg/L	0.020^{3}	mg/L	15.0	μg/L	6.0 ³	μg/L	2 of 30 samples	Corrosion of Home Plumbing
Warren Water District	1.3	mg/L	< 0.022	mg/L	15.0	μg/L	< 5.0 ²	μg/L	0 of 20 samples	Corrosion of Home Plumbing
Waukee	1.3	mg/L	<0.023	mg/L	15.0	μg/L	<6.0 ³	μg/L	1 of 41 samples	Corrosion of Home Plumbing
Windsor Heights	1.3	mg/L	nd²	mg/L	15.0	μg/L	10.0 ²	μg/L	(see DMWW results)	Corrosion of Home Plumbing
Xenia Rural Water	1.3	mg/L	0.035	mg/L	15.0	μg/L	<5.0	μg/L	0 of 30 samples	Corrosion of Home Plumbing

*Health Advisory Level ** 90% of samples must be below Action Level ***Screening level. If 50 pCi/L is exceeded, further testing must be performed.

¹1998 data - testing not required in 2001 ²1999 data - testing not required in 2001 ³2000 data - testing not required in 2001

BONDURANT NITRATE TESTING RESULTS: Nitrate test results for water produced at the Bondurant water treatment facility on 1/10/2001 (prior to using DMWW water) was 8.7 mg/L. The EPA limit is 10.0 mg/L. The City of Bondurant began using DMWW water as of January 15, 2001.

NOTE: The EPA requires monitoring of over 80 drinking water contaminants. Those listed above are the only contaminants detected in your drinking water. For a complete list or for more information about contaminants, please contact Des Moines Water Works or your local water utility. Contact information for each water utility is listed on page 4 of this publication.

Distribution	The following utilities had	distribution violations in 2001. The specifics of each violation and corrective action	s are provided in detail. If you have any questions, please contact the utility.
\sim	UTILITY	VIOLATION	CORRECTIVE ACTION
Violations	City of Ankeny	Lead exceeded 90th percentile Action Level (AL)	Public education and continue lead & copper testing
A 17		Sampling violation	
6%	City of Norwalk .	Total Coliform (TCR) monitoring violation (8/2001)	Public education, notification and retesting

de•fine -a: to discover and set forth the meaning of (as a word); b: to make distinct, clear, or

Action Level (AL) - The concentration of a contaminant that, if exceeded, triggers a treatment or **nd** - Not detected other requirement that a water system must follow.

Inorganic Chemicals - Chemical substances of mineral origin, such as lead and copper. Maximum Contaminant Level (MCL) - The highest level of a contaminant allowed in drinking vater. MCLs are set as close to the MCLGs as feasible using the best available treatment tech-

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. Microbiological Contaminants - Very small organisms, such as bacteria, algae, plankton, and

NA - Not applicable

NTU - Nephelometric Turbidity Units.

Organic Contaminants - Naturally occurring or synthetic substances containing mainly carbon, hydrogen, nitrogen, and oxygen. This includes most pesticides and industrial chemicals. pCi/L - picocuries per liter; measure of radioactivity.

μg/L - micrograms per liter; parts of contaminant per billion parts of water. One part per billion (ppb) is equivalent to a single penny in ten million dollars.

mg/L - milligrams per liter; parts of contaminant per million parts of water. One part per million (ppm) is equivalent to a single penny in ten thousand dollars.

Radionuclides - Contaminants giving off ionizing radiation.

DMWW PUBLIC NOTICE

Des Moines Water Works is required to collect one trihalomethane sample for its Fleur Drive Treatment Plant and four trihalomethane samples for its Maffitt Treatment Plant each quarter. The sampling error mentioned in the paragraph below concerned the Maffitt Treatment Plant. Four trihalomethane samples were collected each calendar quarter for the Maffitt Treatment Plant from the time the plant was placed online in May of 2000 through March of 2001. All of these samples were well below the maximum allowable level for trihalomethanes. At the end of one year of sampling, a new operating permit was issued, and Des Moines Water Works staff misunderstood the intent of the new permit, collecting only one compliance sample for the quarter that ended in June of 2001. This misunderstanding was due in large part to the fact that only one trihalomethane sample per quarter is required for the Fleur Drive Treatment Plant. Several other samples were collected for the Maffitt Treatment Plant during the quarter in question and all of these samples were well below the maximum allowable level for trihalomethane. These samples could not be used to meet the regulation because all four compliance samples must be taken within 24 hours of each other. We regret our error in meeting this monitoring requirement but emphasize that all samples tested were well below the maximum allowable level for trihalomethanes.

The Des Moines Water Works Maffitt Water Treatment Plant is required by state and federal regulations to test four water samples per quarter for trihalomethanes. Des Moines Water Works regrets its failure to collect the appropriate number of samples and will work to make sure that the testing schedule is observed in the future. Customers with questions or concerns about sampling schedules, or any other water issues, should contact Des Moines Water Works at 283-8700.

Kids' Corner Answer Key: Wet Words: 1. f 2. g 3. a 4. d 5. b 6. c 7. e Watershed, Watershed: You and I can make a difference.

Page 2 • 2002 Consumer Confidence Report

Delivering The Kind Of Treatment You Deserve

Water Treatment is a vital step to ensuring a safe, high quality product is delivered to Des Moines Water Works' customers. A new 25 million gallons per day (mgd) treatment plant at Maffitt Reservoir was placed into operation in mid-2000 to supplement the 80 year old, 100 mgd plant on Fleur Drive.

The Maffitt plant's main water source is shallow groundwater collected from wells along the river which utilize the earth's natural filtering through course sands and gravels to deliver a water free from river sediment. The 1.3 billion gallon Maffitt Reservoir serves as an emergency supply for the new plant. The Fleur Drive plant has the flexibility to draw water from either the Raccoon or the Des Moines Rivers in addition to the infiltration gallery. Des Moines Water Works plant operators, in consultation with our laboratory staff, will select the river source that has the highest quality water. The gallery collects water from the same shallow groundwater formation as the Maffitt plant. Additionally, in an emergency situation, the Fleur plant can draw up to 6 billion gallons of water from Saylorville Reservoir.

Both the Fleur and Maffitt plants purify the water in a similar fashion. The Fleur plant has an added pretreatment process that removes silt and dirt from the river water. Powdered carbon is also used only with river water to reduce dissolved organic matter.

This organic matter results from the natural decay of leaves and vegetation in addition to agricultural and municipal wastewater discharges. The Maffitt plant does not need this pretreatment step because shallow groundwater and the water from Maffitt Reservoir have no sediment to remove.

Lime softening is the second treatment process used

Cryptosporidium

Cryptosporidium is a microscopic organism

found in rivers and streams that can cause

injested. It finds its way into the watershed

from which we draw water and is effectively

includes sedimentation, filtration, and disin-

eliminated by a treatment process that

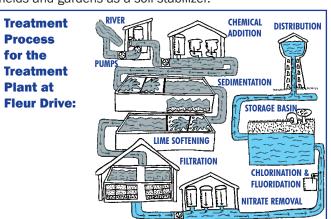
through animal and human wastes.

diarrhea, fever and castrointestinal distress if

Cryptosporidium is rarely found in the rivers

Cryptosporidium has <u>NEVER</u> been found in

at the Fleur plant and is the first step at Maffitt. Through lime softening, hardness minerals, germs, and bacteria calcium residue, used in agriculture by applying to farm fields and gardens as a soil stabilizer.



Following softening at both plants, the water is stabilized with carbon dioxide then filtered. During this process, all particles are removed as the water flows through the sand and gravel or anthracite coal and sand media. When necessary at the Fleur plant, a fraction of water receives nitrate removal through an ion exchange process and is blended with the rest of the post-filtered water to stay safely below the health standard for nitrate. The Maffitt plant water does not require nitrate removal since the shallow groundwater source contains reduced levels of nitrate compared with the rivers, and can be easily blended with nitrate-free water from Maffitt Reservoir to remain below the health standard. Once filtered, fluoride is added to help prevent dental cavities

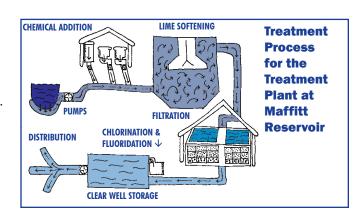
and chlorine is added to disinfect the water.

When the treatment process at both plants is completare removed. Softening produces an excellent by-product, ed, the treated water enters a storage tank prior to being pumped into the distribution network. Both plants have a sufficient number of pumps to provide a reliable supply of water in case one pump is down for repairs. Both plants also have emergency power supplies to maintain plant and pumping operation when electricity is interrupted.

The distribution system consists of more than 800 miles of pipe, 6,800 hydrants, 18,800 valves, 5 water storage tanks, and 3 booster pumping stations.

Throughout the treatment process, the laboratory staff performs tests to ensure the highest quality water is produced. Through a series of daily tests on the untreated water sources, the laboratory staff can also identify any necessary changes in the treatment process before the water enters the plant.

The laboratory also carries out a progressive research program and performs several research projects and studies throughout the year.



Shedding Light on Your Watershed

There are three sources of water fulfilling the needs of Des Moines Water Works customers. Approximately two-thirds is supplied by either the Raccoon or Des Moines River. The remaining one-third comes from the infiltration gallery system (shallow groundwater).

As rain and snow run across the slope of land in our watershed, they carry soil and pollution, depositing them in creeks leading to the Raccoon and Des Moines Rivers. Some precipitation sinks into the ground, dissolving substances that may enter our groundwater supplies. Everyone can contribute to improving water shed health by utilizing conservation practices that protect the land and the quality of water in our rivers. Improving environmental quality improves our quality of life now and in the future.

Des Moines and Raccoon R

A Message from the Environmental Protection Agency

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, Environmental Protection Agency (EPA) prescribes regula-

and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Some people may be more vulnerable to contaminants in drinking water than the general population.

your drinking water.

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 Center for Disease Control has guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial

contaminants. They are available from the Safe Drinking Water Hotline

In order to ensure that tap water is safe to drink, the

tions, which limit the amount of certain contaminants in water provided by public vater systems

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 n drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for nealth care provider.

Infants and young children are typically nore 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 your 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 and flush your tap for 30

seconds to 2 minutes before using tap water

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical and mental development. Children should show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

FDA regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Any bottled water that is labeled "drinking short periods of time because of rainfall or water" has to meet EPA's drinking water regulations. agricultural activity. If you are caring for an Drinking water, including bottled water, may reasonably infant, you should ask for advice from your 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.

> **SAFE DRINKING WATER HOTLINE:** 1-800-426-4791 www.epa.gov/OGWDW

Page 3 • 2002 Consumer Confidence Report