

In the August 19, 2008 issue of the Water Quality Update:

- Water Utility Board to Approve Water Conservation Plan
- Well Status Report – Seasonal Wells
- Water Quality Test Results – July 2008
- Radionuclide Monitoring Update
- Unregulated Contaminants Monitoring – UCMR2
- Subscribe to the Drinking Water Quality Listserv

Water Utility Board to Approve Water Conservation Plan

The Madison Water Utility Board is expected to approve the agency's Water Conservation and Sustainability Plan on August 26. The plan's goal is to assure a reliable, high quality water supply for the future. Among the plan's recommendations are conservation measures that would allow for population growth without increasing current water pumpage rates. These recommendations are designed to reduce per capita water consumption through measures such as customer rebates for installing high efficiency toilets and instituting higher pricing for higher volume customers.

After the board's final approval, the plan will make its way to the Madison Common Council for discussion. Funding for implementation of the plan's recommendations is also dependent upon approval of the utility's current rate case by the state Public Service Commission, which could occur sometime in the fall.

Well Status Report – Seasonal Wells

Well 29 – Well 29 continues to operate on stand-by and is expected to do so through the end of September. Stand-by assures its availability for fire fighting or other water emergencies during the summer months. Because of lower than normal seasonal demand, the Utility has decided to pump the water to the storm sewer rather than into the distribution system. About 200,000 gallons of water are delivered to the sewer, once a week, to turn over the reservoir. Weekly evaluations of demand determine whether the water is pumped into the distribution system.

Water quality issues have been a problem at Well 29, located on Madison's Far East side, since its start-up in 2005. Naturally occurring iron and manganese occur at levels that can discolor the water yellow, orange, or brown. Although not at a level that causes a health concern, the water can stain laundry and plumbing fixtures. As a result, the utility plans to install a filter to remove these minerals. The filter is expected to begin operation in summer 2009. After the installation of a filter, the well is expected to operate year-round.

Well 10 – The Water Utility had planned to operate Well 10 on reserve supply beginning July 1. However, due to lower than normal seasonal water demand, it appears the Water Utility will not need to use the well this year.

Beginning September 9, weather permitting, the Utility plans to temporarily run the well to waste in order to collect water quality samples (see *Radionuclide Monitoring Update* below) to satisfy an U.S. Environmental Protection Agency and Wisconsin Department of Natural Resources monitoring requirement. Pumping of the well should be complete by September 12. During this brief period of pumping, none of the water will enter the distribution system for use by the public.

Other Seasonal Wells – All other seasonal wells are currently in service and are expected to operate until at least early October. Details regarding when these wells will be taken out of service will be posted to this listserv.

Water Quality Test Results – July 2008

MICROBIOLOGY – In July, the Water Utility collected 469 water samples from Water Utility facilities and representative sample locations in the water distribution system. These samples were tested for coliform bacteria – indicators of potential water contamination. None of the samples collected in July tested positive for coliform bacteria.

ANNUAL INORGANICS – The utility annually collects samples from all operating wells and tests them for a suite of 32 inorganic substances including iron, manganese, nitrate, arsenic, lead, sodium, and chloride. Sampling was completed in June and early July. Complete test results are available in the attached pdf.

[2008 Inorganics Table](#)

IRON & MANGANESE – The utility also tested samples collected from all operating wells for iron and manganese. At elevated levels, these minerals can cause yellow, orange, or brown colored water. Test results are shown in the table below.

	Mn (ppb)	Iron (ppm)
UW 6	1.5	0.010
UW7	26	0.373
UW 8	52	0.638
UW 9	1.5	0.008
UW 11	16	0.019
UW 12	0.3	0.002
UW 13	11	0.045
UW 14	<0.19	<0.0014
UW 15	7.0	0.014
UW 16	0.4	0.003
UW 17	32	0.100

	Mn (ppb)	Iron (ppm)
UW 18	0.7	<0.0014
UW 19	44	0.201
UW 20	0.9	<0.0014
UW 23	28	0.060
UW 24	28	0.200
UW 25	12	0.085
UW 26	2.3	0.053
UW 27	35	0.101
UW 28	24	0.201
UW 29	85	0.229
UW 30	14	0.198

VOLATILE ORGANIC COMPOUNDS – In July, the Utility collected samples from fifteen wells and had the water tested for the presence of volatile organic compounds – man-made contaminants that may be present in groundwater. The Water Utility annually tests all wells, usually in July or August, for over 40 of these compounds including tetrachloroethylene and carbon tetrachloride. The table below shows only the contaminants detected, the maximum concentration found, the EPA maximum contaminant level (MCL), and the concentration that was measured at each of the fifteen wells. ND means that the contaminant was not detected.

VOLATILE ORGANIC COMPOUNDS	MAXIMUM	UNITS	MCL	6	7	8	9	12	13	14	17	18	19	20	24	26	27	28	
Bromodichloromethane*	1.8	ppb	--	ND	[0.55]	0.61	[0.39]	ND	ND	ND	0.93	ND	1.8	ND	1.2	[0.49]	[0.22]	[0.23]	
Bromoform*	0.45	ppb	--	[0.25] ¹	ND	ND	[0.45]	ND	ND	[0.34]	[0.21]	ND	ND	ND	[0.21]	[0.28]	[0.21]	ND	
Chloroform*	2.3	ppb	--	ND	[0.44]	0.63	ND	ND	ND	ND	[0.62]	ND	2.3	ND	[0.67]	[0.25]	ND	ND	
Dibromochloromethane*	1.1	ppb	--	ND	[0.44]	[0.38]	[0.74]	ND	ND	[0.25]	[0.79]	ND	0.88	ND	1.1	[0.63]	[0.35]	ND	
Total Trihalomethanes (TTHM)	5.0	ppb	80	0.25	1.4	1.6	1.6	ND	ND	0.59	2.6	ND	5.0	ND	3.2	1.7	0.78	0.23	
1,2-Dichloroethylene (cis)	0.26	ppb	70	ND	ND	[0.26]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Tetrachloroethylene	2.2	ppb	5	0.46	ND	ND	2.2	ND	ND	0.65	ND	0.97	ND	ND	ND	ND	ND	[0.38]	ND
Trichloroethylene	0.28	ppb	5	ND	ND	ND	ND	ND	ND	[0.28]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.26	ppb	--							[0.26]									

* Disinfection By-Product

¹ Bracketed numbers indicate that the contaminant was detected but measured below the Level of Quantification (LOQ)

Radionuclide Monitoring Update

The Water Utility previously reported that grab samples would be collected from seven wells and tested for radionuclides (gross alpha, radium-226, radium-228, and uranium) while composite samples would be collected at the remaining wells. A composite sample involves collecting a sample during each of four consecutive quarters (each three-month period) and combining the four sub-samples prior to submitting the composite sample for analysis.

Test results for grab samples collected at five wells (UW 7, UW 19, UW 23, UW 27, & UW 28) were previously reported. Wells 10 and 29 will be sampled in early September. Collection of the first and second portions of composite samples is now complete for the remaining sixteen wells. Two additional portions will be collected prior to the final submission of the composite samples in spring 2009.

Unregulated Contaminants Monitoring – UCMR2

The Safe Drinking Water Act (SDWA) requires that the U.S. Environmental Protection Agency establish criterion for a program to monitor unregulated contaminants and to publish a list of contaminants to be monitored every five year. Unregulated contaminants are substances for which a maximum contaminant level (MCL) has yet to be established. Monitoring for these substances provides occurrence and exposure data that help the regulatory agency determine whether the contaminants should be regulated.

Monitoring for cycle two of the Unregulated Contaminants Monitoring Regulation ([UCMR2](#)) will occur during 2008-2010. All community water systems serving more than 10,000 people are required to monitor. Madison Water Utility will collect water samples during the week of August 18th and again in late February or early March. The samples will be collected from all wells and at seven locations in the distribution system.

Water samples will be analyzed for 25 potential contaminants including pesticides and their degradates, flame retardants, explosives, and disinfection by-products. Additional details regarding the regulation and monitored contaminants can be found on the EPA website at:

<http://www.epa.gov/safewater/ucmr/ucmr2/index.html>

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<http://lavos.wiscnet.net/mailman/listinfo/drinkingwaterquality>