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Well Status Report – Seasonal Wells

The City of Madison drinking water system includes twenty-three wells, however, only sixteen operate year-round. The remaining seven wells operate on a seasonal basis when water demand is higher due to outdoor water use. Seasonal wells enable the Water Utility to meet peak water demand while also ensuring sufficient fire flow during the summer months. Seasonal wells are taken out of service in the fall as water demand drops.

- Wells 6, 27, and 29 are currently operating.
- Well 28 was brought into service on May 26th.
- Well 17 is expected to be on-line around June 1st.
- Wells 8 and 10 remain out of service.

Water Quality Test Results – April 2009

MICROBIOLOGY – In April, Water Utility staff collected 407 water samples from Water Utility facilities and representative sample locations in the distribution system. Samples were tested for coliform bacteria – indicators of potential water contamination. None of the samples collected in April tested positive for coliform bacteria.

IRON & MANGANESE – The utility also collected samples from ten wells and tested the water for manganese and iron. At elevated levels, these minerals can cause yellow, orange, or brown colored water. Monthly water samples are typically collected from operating wells that exceed 0.15 ppm iron or 25 ppb manganese. The April test results are shown in the table below.

	Mn (ppb)	Iron (ppm)
UW 6	0.9	0.008
UW 7	27	0.408
UW 11	1.5	0.006
UW 18	0.8	0.014
UW 19	42	0.196

	Mn (ppb)	Iron (ppm)
UW 23	54	0.158
UW 24	28	0.134
UW 26	57	0.134
UW 27	29	0.160
UW 30	14	0.202

RESIDENTIAL IRON & MANGANESE – Thirteen tap samples were collected from eleven homes in the Well 8 service area in April. These homes were receiving water from Well 11 or Well 24 because Well 8 is currently out of service. Manganese levels ranged from 2-40 parts per billion (ppb) with a median of 13 ppb. Iron levels ranged from 0.01-0.63 parts per million (ppm) with a median of 0.07 ppm. Residential tap samples were also collected from five homes in the Well 29 area. Results were below 5 ppb manganese and 0.02 ppm iron. Samples were collected before start-up of the iron and manganese filter.

VOLATILE ORGANIC COMPOUNDS – In April, the Utility collected samples from five wells. The samples were tested for 40+ volatile organic compounds (VOCs) – man-made contaminants that may be present in groundwater. These wells are tested quarterly due to previous detections of volatile organic compounds. The table shows only the contaminants that were detected, the EPA maximum contaminant level (MCL), and the concentration that was measured.

VOLATILE ORGANIC COMPOUNDS	MCL	UNITS	9	11	14	15	18
Bromodichloromethane*	--	ppb	[0.44]	<0.21	<0.21	[0.39]	[0.30]
Bromoform*	--	ppb	0.49	[0.32]	[0.42]	0.94	0.52
Chloroform*	--	ppb	[0.15]	[0.16]	<0.12	<0.12	[0.36]
Dibromochloromethane*	--	ppb	0.82	[0.31]	[0.30]	1.0	0.63
Total Trihalomethanes (TTHM)	80	ppb	1.9	0.79	0.72	2.3	1.8
Dichlorodifluoromethane	--	ppb	nr	nr	[0.23]	nr	nr
1,2-Dichloroethylene (cis)	70	ppb	<0.10	[0.30]	[0.11]	<0.10	<0.10
Methyl t-butyl ether	--	ppb	<0.13	<0.13	<0.13	[0.14]	<0.13
Tetrachloroethylene	5	ppb	2.1	[0.54]	[0.76]	3.6	3.3
1,1,1-Trichloroethane	200	ppb	[0.11]	<0.10	<0.10	<0.10	[0.28]
Trichloroethylene	5	ppb	<0.25	[0.27]	[0.37]	[0.35]	[0.36]
Trichlorofluoromethane	--	ppb	nr	1.1	nr	nr	nr

* Disinfection byproduct
nr = not reported

Bracketed numbers, [0.44], mean the results are below the LOQ
LOQ = Limit of Quantification

Unregulated Contaminants Monitoring Update

The Water Utility is nearing completion of required monitoring to comply with the Unregulated Contaminants Monitoring Regulation, Cycle 2 (UCMR2). Samples have been collected from 19 wells and seven representative distribution locations. None of the 25 potential contaminants was detected at any location.

More information on the regulation can be found on the UCMR2 page of the US Environmental Protection Agency website, <http://www.epa.gov/safewater/ucmr/ucmr2/index.html>.

Radionuclide Monitoring Update

In April, the Water Utility completed its radionuclide monitoring by collecting samples at each well. All test results were below the Maximum Contaminant Level (MCL) for each contaminant. Over the previous year, one-time grab samples were collected at seven wells while composite samples were collected at the other 16 wells. Composite samples involve collecting a sample during each of four consecutive quarters (each three-month period) and then combining the four sub-samples prior to submitting the sample for analysis. Both types of samples were tested for radioactive elements, including radium and uranium, and other gross measures of radioactivity. Test results are summarized in the table below.

	Gross Alpha pCi/L	Gross Beta pCi/L	Radium-226 pCi/L	Radium-228 pCi/L	Uranium ug/L
Minimum	1.1	1.4	0.06	0.25	0.29
Median	3.5	3.3	0.64	0.87	0.83
Maximum	10.3	11.8	2.7	3.8	2.0
MCL	15	50	5*	5*	30

MCL - Maximum Contaminant Level

* MCL for combined radium (226+228) is 5 pCi/L

Well 29 Filter Update

The filter at Well 29 has been operating since April 15. It is successfully reducing iron and manganese to levels well below the secondary drinking water standards of 0.3 parts per million (ppm) and 50 parts per billion (ppb), respectively. Test results for samples taken during the 30-day commissioning test show that the filtered water entering the distribution system has 1-2 ppb manganese and 0.01 ppm iron.

The well is expected to pump year round and deliver about 1.6 million gallons per day to East Side residents. An official dedication is being planned for July 11th when final construction and landscaping should be complete.

Capital Improvement Budget Hearing – June 4th at 6 p.m.

The Water Utility will be holding its first-ever public hearing on the proposed 2010-2015 Long Range Capital Improvement Budget. The hearing will take place on Thursday, June 4th at 6 p.m. in the main conference room at the Water Utility Administrative Building, 119 E Olin Avenue. Water Utility personnel will explain the budgeting process and make a short presentation on the proposed budget. Following the presentation, staff will hear testimony on the proposed \$19-million 2010 budget and projects planned through 2015. The proposed budget will be presented to the Water Utility Board at its meeting on June 23, prior to submission to the Comptroller's office for inclusion in the Mayor's 2010 Capital budget. The draft budget is available on our website, www.madisonwater.org.

Public Participation Process Update

In 2008, the Water Utility Board adopted a formal public participation process that will provide multiple opportunities for public input on proposed projects from inception to construction. The process is currently being used on each of the following capital improvement projects:

- [Zone 4 Water Supply Augmentation](#) – additional water supply and enhanced fire flow capacity for southeast Madison
- [Arbor Hills Supplemental Fire Flow Supply](#) – enhanced fire flow capacity for south Madison
- [Near West Side Water Supply Augmentation](#) – additional water supply for west Madison
- [Well 8 Iron and Manganese Mitigation](#) – water quality improvements for the Isthmus and Near East neighborhoods

Complete project descriptions can be found on our website at www.madisonwater.org. In addition, a Citizen Advisory Panel (CAP) is being formed for each project. Citizens are invited and encouraged to participate. Contact the Utility at 266-4651 or water@cityofmadison.com if you would like to get involved.

Subscribe to the Drinking Water Quality Listserv

People who want to receive regular updates on Madison's drinking water quality can subscribe to this e-mail listserv at <https://my.cityofmadison.com/>.

Registration is simple and provides access to dozens of City of Madison e-mail lists including Drinking Water Quality (this one) and Water Main Flushing, as well as departmental messages from Metro Transit, City Parks, Public Health, and Police.

Once registered for a “My Account”, click on the check box for “Drinking Water Quality” under the Water Utility heading.

Please contact me if you need assistance with registration.

Sincerely,
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