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### **Annual Drinking Water Quality Report Released**

Madison Water Utility released its Annual Drinking Water Quality Report on May 1<sup>st</sup> to coincide with National Drinking Water Week, which ran from May 4-10. As required by federal and state drinking water regulations, over 110,000 copies were printed and mailed to current customers. Customers in the City of Madison received the report as an eight-page newsletter. The report is also available on our website at [www.madisonwater.org](http://www.madisonwater.org). Additional copies can be obtained by calling the Water Quality section at 266-4654, or later this month at any Madison Public Library.

The report describes the source of Madison's tap water – a deep groundwater aquifer – and what citizens can do to help protect and maintain the quality and quantity of our drinking water. The report references [Operation Clean Sweep](#) for the disposal of household hazardous chemicals and unused medicines. For example, a Med Drop event is currently scheduled for June 7 from 9 a.m. to 1 p.m. at 121 E Olin Avenue. The report also provides links to on-line resources for reducing one's use of toxic substances around the house, and better home and garden practices that help to conserve water.

The annual report also details the chemical contaminants that have been detected in Madison tap water. Most of these contaminants are naturally occurring elements that arise from dissolution of the rock and minerals that form the underground aquifer from which the utility draws the water. The report also identifies man-made chemicals that have been found in Madison municipal wells.

The annual report provides a snapshot of water quality for all of Madison's wells. However, for more detailed information on the specific wells that serve a particular address, visit our website or call the Water Utility at 266-4654 to obtain an individualized report for each well.

To provide comments or feedback on this year's annual report, please e-mail [water@cityofmadison.com](mailto:water@cityofmadison.com).

### **Unit Well 3 Abandonment Update**

The permanent abandonment of Unit Well 3 was completed on Thursday, April 3. As part of the abandonment, the pump was removed from the well and the open borehole was filled with pea gravel and concrete. Prior to filling the borehole, staff from Wisconsin Geological and Natural History Survey logged the well to obtain physical and geological data about the rock formations that make up the upper and lower aquifers, the relative depths, and thickness of the Eau Claire Shale confining layer at the well site.

Unit Well 3 was located at the intersection of East Johnson Street and First Street. The well formerly served the isthmus and near east neighborhoods prior to its permanent shutdown in September 2006.

### **Unit Well 15 Update**

Unit Well 15 was placed back into service on May 8 after a groundwater sample taken from the well tested coliform-negative. The well serves the City's northeast side and is in the general location of East Washington Avenue and Lien Road. Groundwater samples previously collected at the well had tested positive for coliform bacteria, prompting the Water Utility to shut down the well on April 27.

Although coliform bacteria had been detected in untreated water, chlorinated water delivered to the distribution system from Well 15 did not show any evidence of coliform. The well was shutdown as an additional precaution. Water Utility staff then shock-disinfected the well with concentrated liquid chlorine and purged the well of the chlorinated solution over several days.

Coliform bacteria grow in soil, on vegetation, or in the intestines of warm-blooded animals and serve as indicators of changing water quality or potential water contamination. Although most coliforms are harmless, they may indicate the presence of other more harmful microbes. They serve as indicators because coliforms are present in larger numbers than more harmful microbes, are simple to detect, and react to environmental changes and treatment processes in ways similar to other pathogens.

Raw groundwater samples are collected and tested for coliform bacteria once per quarter from all operating wells. If the water sample tests positive for coliforms, a repeat or check sample is also collected to confirm the original positive result. The Water Utility also tests treated (chlorinated) water as it enters the distribution system. Samples are collected daily Monday through Thursday from operating wells. Finally, samples are taken from representative locations in the distribution system, also Monday through Thursday, and tested for coliform bacteria. On average, the utility collects 350-400 water samples per month for coliform testing.

### **Well Status Report – Seasonal Wells**

The City of Madison drinking water system includes twenty-three wells although only sixteen of them operate year-round. The remaining 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 during summer months while also ensuring sufficient fire flow.

Some seasonal wells, Wells 17 and 28 in particular, have already been put back into service as seasonal water demand is expected to increase. Well 6 is scheduled to begin operating later this week. Other seasonal wells are scheduled to begin operating on or after the dates noted below.

- Unit Well 27 – June 1<sup>st</sup>
- Unit Well 8 – July 1<sup>st</sup>
- Unit Well 29 – July 1<sup>st</sup>
- Unit Well 10 – July 1<sup>st</sup>

**Well 29** – Well 29 is expected to operate on stand-by between July and September. Stand-by refers to a condition in which the water in the reservoir is turned over twice weekly, delivering Well 29 water to the distribution system for two, four-hour periods each week. Operating on stand-by maintains the readiness of the well should it be needed in cases of emergency (fire, extreme drought, another well being out of service) during the summer months. During 2007, Well 29 delivered 7 million gallons of water to the distribution system. By comparison, a typical municipal well operating at maximum capacity can pump 3 million gallons per day.

**Well 10** – Well 10 is again expected to operate on reserve supply between July and September. During these months, utility staff will visit the well weekly to maintain its readiness in the event of an emergency. Under normal operating conditions, Well 10 water will not be pumped into the distribution system. The last time Well 10 water was delivered to customer taps was in August 2006.

## Water Quality Test Results – March & April 2008

MICROBIOLOGY – In March and April, the Water Utility collected 802 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. Two samples, both untreated (non-chlorinated) groundwater samples from Well 15, showed the presence of coliform bacteria (see *Unit Well 15 Update* above). Otherwise, the remaining 800 water samples were coliform-negative.

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

	March	
	Mn (ppb)	Iron (ppm)
UW 11	14	0.015
UW 19	40	0.185
UW 23	32	0.067
UW 24	28	0.175
UW 28	24	0.202
UW 30	14	0.198

	April	
	Mn (ppb)	Iron (ppm)
UW 11	17	0.017
UW 19	43	0.210
UW 23	31	0.069
UW 24	29	0.175
UW 28	n/s	n/s
UW 30	15	0.224

### Subscribe to the Drinking Water Quality Listserv

People who want to receive regular updates on Madison's drinking water quality can subscribe to this Listserv at:

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

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