

Water Quality Monitoring Report

2008 Monitoring Schedule



Monthly Report for: **Jun-08**

Analyte Group	Sample Locations	Monitoring Requirements (# of Samples)		Monitoring Activity (# of samples)		Violations & Public Notices
		Monitoring Period	2008 Annual Requirement	Current Month	Year to Date 2008	Year to Date
Daily/Routine Samples						
Coliform Bacteria	Operating Wells and Distribution Sites	120	1500	372	1928	0
Free Chlorine Residual "Grab" Samples	Operating Wells and Distribution Sites	160 ¹	1900 ¹	666	3353	0
Fluoride	Operating Wells	450 ¹	5400 ¹	441	2182	0
Quarterly Samples						
Volatile Organic Compounds (41 analytes)	Wells	4 ¹	16 ¹	4	8	0
Coliform Bacteria (Raw Water)	Wells	21 ¹	84 ¹	6	40	0
Annual Samples						
Inorganic Contaminants ² (28 analytes)	Wells	21	21	0	0	0
Volatile Organic Compounds ² (41 analytes)	Wells	17	17	0	1	0
Disinfection Byproducts - Total Trihalomethanes & Haloacetic Acids	Distribution Sites	7	7	0	0	0
Specialty Samples						
Synthetic Organic Compounds (2 analytes)	Wells	1	1	0	0	0
Radionuclides (4 analytes)	Wells	21	21	0	0	0
Unregulated Contaminants (UCMR2 - 25 analytes)	Wells	22	22	0	0	0
	Distribution Sites	7	7	0	0	0
Iron & Manganese	Wells	na	na	11	69	na
	Residential Taps	na	na	0	1	na

(1) Sampling requirement will vary depending on the number of wells in operation during specific days or quarters

(2) Sampling is usually completed June to September in each calendar year, with results reported in the month following sampling.

Calls Logged to the Water Quality Correspondence Database - 2008
Update: 6/4/08

Year	Month	All Calls	Color	Manganese	Pressure	Taste	Odor	No Water	Other
2008	January	69	41	1	1	7	5	1	17
2008	February	41	18	4	2	1	1	0	19
2008	March	84	54	2	7	4	5	0	18
2008	April	131	78	4	5	6	6	6	35
2008	May	126	68	3	5	7	10	10	40
2008	June								
2008	July								
2008	August								
2008	September								
2008	October								
2008	November								
2008	December								
2008	TOTAL	451	259	14	20	25	27	17	129

Year	Month	All Calls	Color	Manganese	Pressure	Taste	Odor	No Water	Other	Alder District
2008	May	7	0	1	0	0	0	0	7	none
2008	May	1	0	0	0	0	0	0	1	unknown
2008	May	2	1	0	0	0	0	0	1	01
2008	May	8	5	0	1	0	1	5	0	02
2008	May	6	1	0	0	1	3	0	2	03
2008	May	1	0	0	0	0	0	1	0	04
2008	May	1	1	0	0	0	0	0	0	05
2008	May	25	21	0	1	0	0	0	4	06
2008	May	2	1	0	0	0	0	1	1	08
2008	May	14	12	0	0	0	0	1	1	09
2008	May	9	6	0	1	0	0	0	2	10
2008	May	3	0	0	1	0	0	0	2	11
2008	May	17	10	0	0	4	4	0	3	12
2008	May	5	1	0	0	0	0	2	2	13
2008	May	4	3	0	0	0	0	0	1	14
2008	May	3	1	0	0	1	1	0	2	15
2008	May	7	3	1	0	0	0	0	4	16
2008	May	6	0	1	0	1	1	0	5	17
2008	May	4	1	0	1	0	0	0	2	19
2008	May	1	1	0	0	0	0	0	0	20

Year	Month	All Calls	Color	Manganese	Pressure	Taste	Odor	No Water	Other	Alder District
2008	April	4	2	1	0	0	0	0	2	none
2008	April	2	0	0	0	0	0	0	2	01
2008	April	1	1	0	0	0	0	0	0	02
2008	April	2	1	0	0	0	0	0	1	03
2008	April	2	2	0	0	0	0	0	0	04
2008	April	19	17	0	0	1	1	0	1	05
2008	April	7	1	0	0	1	1	0	5	06
2008	April	1	0	0	0	1	1	0	0	07
2008	April	1	0	0	0	0	0	1	0	08
2008	April	4	2	0	1	0	0	0	1	09
2008	April	6	2	1	0	0	1	0	3	10
2008	April	5	2	0	1	0	0	0	2	11
2008	April	14	12	0	1	0	0	0	1	12
2008	April	7	4	0	0	0	0	0	3	13
2008	April	5	2	1	0	0	0	0	3	14
2008	April	17	15	0	0	0	0	0	2	15
2008	April	20	12	0	0	0	0	4	5	16
2008	April	3	0	0	0	1	1	0	1	17
2008	April	3	1	0	2	0	0	0	0	18
2008	April	4	0	1	0	0	0	1	3	19
2008	April	4	2	0	0	2	1	0	0	20

Water Quality Technical Advisory Committee – Meeting Minutes (DRAFT)

119 E Olin Ave, Main Conference Room

5/15/08, 10:00 am

Present: Janet Battista (JB), Ken Bradbury (KB), Joe Demorett (JD), Joseph Grande (JG), Jocelyn Hemming (JH), and Al Larson (AL)

Absent: Sharon Long, Larry Nelson

Agenda Items:

- A. Sentinel Wells at UW 29 - Joe Demorett
- B. Groundwater modeling proposal for UW 16 - Al Larson
- C. Larkin Street pump test results/ Benchmarks for satisfactory water quality - Joe Grande
- D. Fact sheet on emerging contaminants - Joe Grande

Agenda Item D: Fact Sheet on Emerging Contaminants

At the 4/17 meeting, the committee recommended that the Water Utility develop a fact sheet regarding emerging contaminants such as pharmaceuticals and endocrine disrupting chemicals that might be present in drinking water. A draft fact sheet was distributed via e-mail prior to the meeting. Feedback included

- The information contained in the fact sheet is factually accurate
- Consider using the final paragraph or a synopsis of it as an executive summary/introduction
- Introduce the subject with language or terms that an average citizen understands; e.g., “You may have heard about contaminants derived from plastic water bottles or pharmaceuticals being found in drinking water supplies in the US.”
- With a better introduction that uses plain language, the information is probably not too technical
- Include additional information about what we test, why, and how we decide to test or not test
- Provide more information that discusses what is known now about the toxicological relevance; that people are currently evaluating these issues; and that we are waiting for more information
- The section on endocrine disruptors is too technical and the identification of one contaminant per chemical class is too narrowly focused and subject to possible misinterpretation
- Strike the entire sentence beginning, “At the present time”, from the final paragraph
- Consider asking people from outside the Water Utility to review the fact sheet prior to its release

Other feedback and discussion on the subject of emerging contaminants included the following:

- There was a sense that the final AwwaRF report will not recommend testing based on the study’s finding a low relative risk for these contaminants because of the low levels they have been found and the absence of toxicological relevance at these levels
- Although some research has shown a low dose response for bisphenol A (BHA), there have been problems with repeatability of the original study outcome
- The Water Resources section at DNR maintains a list of contaminants of concern or “candidates for prioritization” that helped establish a state standard for atrazine and alachlor; Henry Anderson, Chief Medical Officer at DHFS can help put pressure on EPA, WDNR to regulate BHA or other pharmaceuticals and endocrine disruptors
- The Water Utility should not be testing for the sake of testing; there should be a carefully thought out rationale for why testing is recommended or not. Testing by itself does not produce a sense of security or safety.
- Is the recent heightened interest in pharmaceuticals/EDC a fad? Newspaper articles alone should not guide policy decisions. The Water Utility must stay on top of the situation and change policy when new information becomes available that changes the view on these or other contaminants

Agenda Item A: Sentinel Wells at UW 29

JD presented a four-page handout from the pump test report showing that pumping at 2300 gpm was likely to capture particles from Sycamore Landfill but pumping at 1100 gpm would not. The proposed location of the sentinel well system is 900 feet west of Unit Well 29 and 700 feet southeast of the edge of waste at the landfill. The location is adjacent to a sidewalk at the southeast corner of the athletic field. It is also along a particle-tracking flow path predicted by the groundwater modeling following the pump test. The sentinel

Agenda Item C: Larkin Street Pump Test Results/ Benchmarks for Satisfactory Water Quality

Committee members were provided with a spreadsheet showing the water quality data (tritium, chloride, iron, manganese, and other field parameters) for the pump test at the Larkin Street well. The committee unanimously agreed that the data does not preclude the site as a viable location for a production well. The data shows that water quality was improving, that is, it was becoming more characteristic of water quality from the lower aquifer than the upper aquifer. Bottom line is that the well was not pumped long enough to obtain lower aquifer water from this location. Nothing here indicates Larkin Street location is an unsuitable site for a future well.

There was some discussion about the need for additional wells. AL explained that a system is designed to meet demand on the peak day or more likely the peak 10-day period. For Madison, this demand is now 55 million gallons per day (MGD) with projections of 65-69 MGD in the future. Questions were asked if the projections take into account conservation. AL added that the Master Plan evaluates historic water use and projected population growth and that it does consider conservation. A conservation goal should be aimed at reducing the peak demand. JB commented that alders and those interested in water conservation should hear about this explanation. AL cautioned that some communities have attempted even/odd outdoor water restrictions but that total water use actually increases. In Madison, overall demand has reached a plateau but the peak is increasing. AL added that the planning process is inherently conservative and looks at worst-case scenarios. For example, the model evaluates the peak day with two wells out of service. Under these conditions, the model evaluates if sufficient fire flow protection would be available. The challenge on the near west side of Madison is (1) the absence of UW 10, (2) development on the west end of the UW campus such as the Children's Hospital, and (3) there are no vacant lots in the vicinity of Larkin Street and the High Service Reservoir. KB stated that we are not running out of water; the utility is unable to pump or deliver the water fast enough to meet demand. There is plenty of water in the ground.

Finally, there was some discussion about the water quality standards to evaluate the viability of new wells. The committee distinguished between minerals (iron and manganese) and VOCs. For example, a level of 0.3 µg/L of tetrachloroethylene might suggest a re-evaluation of alternative sites. It would also depend on the location of the well and if something was found to be present that there was little or no knowledge of its source. Detections of man-made contaminants such as organic solvents are significant and would raise a red flag. Would not want to invest additional resources without further investigation. If it were a single VOC detection, you might repeat the analysis, question/trust the test result, or perform additional sampling to determine the interval/depth at which the contaminant is present. At a minimum, it would warrant more testing to ensure a long-term supply or quality drinking water.

The committee did not object to the next meeting being held in late July.

Meeting adjourned at 12:00 p.m.