



IOWA DEPARTMENT OF NATURAL RESOURCES

Water Supply News

Environmental Services

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Manganese Testing during Sanitary Surveys to start July 1

Manganese is a naturally-occurring element in the earth's geology and is found in the surface and ground waters of the state at various concentrations. Elevated levels of manganese have long been considered to be an aesthetic problem in drinking water, causing taste, odor, and staining problems. EPA has had an unenforceable, secondary standard of 0.05 mg/L (parts per million) for many years, below which adverse aesthetic effects are not expected to occur. Manganese is an essential nutrient in our diet, and too much or too little both have adverse human health effects. There are newer studies that indicate elevated manganese levels can cause adverse human health effects, so EPA has included manganese in the testing required to determine if national regulation as a primary drinking water standard is needed.

This testing, called the Unregulated Contaminant Monitoring Rule #4 (UCMR4), is in its second of three years of national testing. All Iowa public water supply systems serving at least 10,000 people, and a selection of smaller systems, are required to monitor for the contaminants listed in the rule. Manganese is included and must be monitored in the finished drinking water. Once the data is collected and analyzed, EPA will make a determination on whether to regulate any of the listed contaminants as a primary drinking water standard. The data for each specific system required to monitor under UCMR is included in that year's Consumer Confidence Report, which is available to their customers by July 1st each year.

EPA has developed health advisories for manganese, which includes both acute (immediate) and non-acute (chronic) levels. For bottle-fed infants six months of age and younger, the acute level is 0.3 mg/L, while the acute level for the rest of the population is 1 mg/L, both of which are 10-day advisories. Typically, manganese concentrations in the groundwater are fairly constant, so there isn't much variation over time. For the entire population, the lifetime health advisory is 0.3 mg/L. Health advisories are not enforceable drinking water standards but public notice can be required when levels exceed the health advisory.

For more information on the UCMR, adverse health effects of manganese, and other information, please visit the [DNR's Drinking Water Health Advisories webpage](#), which includes links to DNR's Frequently Asked Questions about Manganese in Drinking Water, DNR's Manganese in Drinking Water Fact Sheet, and other reference material.

In Iowa, the groundwater aquifers are known to contain manganese, with those in the western half of the state testing at higher concentrations in the raw well water monitoring that has been done. Staff in the DNR's water supply program have been working on developing a response to this emerging contaminant since the UCMR4 testing started, and have been presenting the issues during operator training events. While to-date there have been no samples over the 0.3 mg/L health advisory level in the UCMR4 testing in Iowa, there have been other samples from Iowa PWS that have had elevated manganese levels. Some of these have been in response to colored water complaint investigations. Prior to UCMR4, there has been no required certified lab testing for manganese in finished drinking water, and there is very little data available about Iowa's systems.

To obtain more data and get an accurate picture of manganese levels in Iowa's more than 1,800 public water supply systems, a sampling effort will soon begin. From July 1, 2019 – June 30, 2022, the DNR inspector will collect a water sample from each source/entry point at each public water supply system during the system's next sanitary survey. The source/entry point is a point which is after any treatment and before entering the distribution system, and the sanitary survey is an on-site inspection of the public water supply system that happens at least every three years. For the smallest systems, where certain county sanitarians conduct an annual visit of those systems, the sampling project will start in July 2020.

The sample will be analyzed for manganese through a contract with the State Hygienic Laboratory. Depending upon the analytical result, the system may have no further action, may have additional samples required on a quarterly or annual basis, and, if the health advisory levels are exceeded, will be required to conduct public notification.

On a national basis, 22 states have had systems with manganese levels over 0.3 mg/L in the first 16 months of the UCMR4 testing.

CCR Reminder – July 1st Deadline

The Consumer Confidence Report is required to be distributed by July 1st by all community public water supply systems (CWS), and a copy of it sent to DNR by July 1st. Even if a system uses the template sent by DNR in March, a copy of what was actually distributed to the consumers must be submitted to DNR by July 1st. **With 6 days to the deadline, we still have more than 430 that haven't been submitted.**

A copy of the report must be sent to DNR by July 1st. The certification must be sent to DNR after you've completed the distribution, no later than October 1, 2019.

- To submit the copy of the distributed CCR and certification by .pdf, email it to CCR@dnr.iowa.gov.

- To submit by fax, send it to 515/725-8202, to the attention of Water Supply Operations.

If a CWS needs an electronic copy of the CCR and/or Certification Form, please send your request to CCR@dnr.iowa.gov.

LCR-LTR to OMB 6/14/2019

The proposed Lead and Copper Rule Long-Term Revisions was submitted by EPA to the Office of Management and Budget on June 14th for their review. The review process could take several months. The revisions are expected to make significant changes to the Lead and Copper Rule.

DWSRF IUP Approved at 6/18/2019 EPC Meeting

The Iowa Environmental Protection Commission approved the Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) Intended Use Plans (IUP) for fiscal year 2020 (July 1, 2019-June 30, 2020). The Commission took the action on June 18, 2019 at their meeting at the Capitol.

[Clean Water State Revolving Fund](#)

[Drinking Water State Revolving Fund](#)

For more information, please contact Theresa Enright, SRF Coordinator, Iowa Department of Natural Resources, 515-725-0498 or theresa.enright@dnr.iowa.gov.

Massive Cyber Attacks Affect Utilities

From WaterOperator.org, 6/18/2019

“Wielding a tool originally developed by the U.S. National Security Agency, cyber criminals attacked the City of Baltimore and Greenville, North Carolina using a ransomware known as RobbinHood. The first attack was on Greenville in April this year. Though Greenville began recovery shortly after, over 800 of the city's computers and its files were held for ransom. The city was forced to shut down their system to prevent further damage.

The same software attacked the City of Baltimore last month. The ongoing, 3-week cyberattack froze thousands of computers, shut down email, and disrupted water bills and other public services. Hackers demanded \$100,000 in bitcoin to free their systems. Officials estimate the attack has cost Baltimore more than \$18 million.

Developing, updating, and practicing your utility's cybersecurity plan is crucial with the increasing frequency and sophistication of cyberattacks. If your facility doesn't have an updated cybersecurity program and education plan, start one now! Our recent blog post describes the importance of cybersecurity for small systems, types of cyberattacks, and useful resources to improve your system's security measures.”

[WaterOperator.org Cybersecurity blog for small systems.](#)

Iowa DNR WS Staff Speaking Engagements

Iowa DNR staff in the water supply program areas are scheduled to speak at the following events. The date, sponsor and event, location, subject, and contact for more information are listed.

- July 8-9, DMACC WET Program Ankeny Annual Water Conference, Ankeny “DNR WS Rules Update; Affidavit Operations; Leadership & Ethics.” [Information and registration](#)
- August 27-28, IA-AWWA Fall Short Course, DMACC-FFA Center, Ankeny “DNR WS Rules Update; Manganese Protocol.” Information and registration not yet available.
- September 17-18, IRWA – Fall Conference, Okoboji, “MO River Flooding & Drinking Water Experience; Manganese testing” Information and registration not yet available.
- October 15-16, IRWA – Fall Conference, Dubuque, “MO River Flooding & Drinking Water Experience; Manganese testing.” Information and registration not yet available.
- October 22-24, IA-AWWA Annual Conference, Ames, “The Good, the Bad, and the Really Ugly; Manganese testing; IDNR WS Rules Update.” Information and registration not yet available.

For other professional development opportunities, see the “Training Calendar” at programs.iowadnr.gov/opcertweb/.