SERVICE CONNECTION

The Maine Drinking Water Program Newsletter

Working Together for Safe Drinking Water Spring 2018 ○ Volume 26, Issue 1

Chains of Custody

Ensure Legal Defensibility in Your Work

Jennifer Jamison

In the broadest sense, a chain of custody is a paper trail that tracks the path of a sample from the time it is collected to when it is accepted by a laboratory. It follows the sequence of custody, analysis, and physical evidence. In the drinking water context, the physical evidence is water, sampled with the intent of testing for the presence of contaminants. The chain of custody provides the documentation necessary to hold up in court (legal defensibility). **Remember:** If it isn't documented properly, it's not legally defensible. By the same token, "If it isn't documented at all, it didn't happen," is not defensible, either.

Proper sampling procedure is important to ensure accurate results. Care should be taken to make sure samples are collected at the correct locations, preserved for analysis, and delivered to the laboratory in a timeframe that meets hold times. Filling out the chain of custody form is as important as properly collecting the samples. The chain is a legal document and it needs to accurately reflect sample details. The chain provides identity and traceability of the samples from collection through reporting.

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Public Education for Lead in Drinking Water: What You Need to Know

Terry Trott

Lead is a common, naturally occurring metal found throughout the environment. Though lead is not commonly found in water supplies, it can enter drinking water when it leaches from plumbing materials that contain lead. Lead in drinking water is a concern due to the harmful health effects it can cause. It is especially unhealthy for young children and pregnant women. Because there is no safe level of lead exposure, the Environmental Protection Agency set the maximum contaminant level goal (MCLG) for lead in drinking water at zero.

The health implications for lead exposure are serious and as such, information on the potential impacts of drinking water with elevated levels of lead is very important. Consumers need to be aware of the potential health effects of lead exposure.

What is an MCLG?

A maximum contaminant level goal (MCLG), also referred to as a public health goal, is different than an MCL, or maximum contaminant level. An MCL is the highest level of a contaminant that is allowed in drinking water and is enforceable under the Safe Drinking Water Act. An MCLG is a level of contaminant in drinking water below which there is no known or expected risk to human health. MCLGs are non-enforceable standards. Lead does not have an MCL, instead the regulation requires an action level (AL) of 15ppb. An action level requires systems to act to prevent corrosion or dissolution of lead.

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An Office of the Department of Health and Human Services

Paul R. LePage, Governor *Ricker Hamilton, Commissioner*

Director's Corner

Michael Plaziak, Acting Program Manager

"Change is inevitable; change is constant."

Benjamin Disraeli

Since our last Service Connection, a few changes have taken place in the Drinking Water Program. After 18 successful years with the program, our director, Roger Crouse, has moved on to expand his horizons as the General Manager of the Kennebec Water District. Good leaders provide clear direction and expectations to their staff. We were fortunate to have had Roger's leadership and guidance over the years. Now, as we embark on the next chapter at the Drinking Water Program, we find ourselves in a solid position to provide you with the same responsive support we have provided in the past. To that end, we are continuing to find ways to improve our processes and become more efficient. We anticipate improvements in sanitary surveys, data management, and other aspects of the Program in the future. We have a skilled team with tremendous talent and we are always willing to hear from you on how we can better serve you.

Yours for safe drinking water,

Mike

Be Prepared!

Do your local Emergency Management Agency and fire and police departments know the location(s) of your public water supply source area(s)? If they don't, they should! Local first responders should be able to identify if a chemical spill or accident is within the vicinity of your supply intake or well. That way, if an incident occurs, they will have the ability to recognize that public health may be at risk and notify the effected water system of the potential impacts as soon as possible. Provide your local first responders with a map of your source protection area(s) and your system's emergency contact information on an annual basis.

Water Operator News: Violations & Operator Responsibilities

Nate Saunders

When a public water system (PWS) with a licensed designated operator receives a violation, the system is responsible for resolving the violation to avoid further enforcement actions – including the possibility of financial penalties. A system's designated operator is responsible for all water quality and quantity decisions at their system and have direct involvement with, if not direct oversight of, all issues that could result in a violation. The role of designated operator includes acting as a key player in resolving violations that are incurred by the public water system that she or he operates.

When a violation occurs, the Drinking Water Program sends the written violation to the water system's administrative contact and the water system's primary designated operator to make sure that both individuals are notified. When the designated operator is informed, she or he should work to resolve the violation as quickly as possible. In summary, a licensed designated operator has the responsibility to be involved with resolving violations that have been issued to a water system that she or he operates. This applies to all licensed water operators.

It's Time to Become Cyber Resilient

Sara Flanagan

Cybersecurity is an emerging threat for all public water systems. To help public water systems become more resilient to cybersecurity threats, the Drinking Water Program will work with Maine Rural Water Association on a cybersecurity initiative. The project will develop new cybersecurity resources, including a cybersecurity resiliency guide, a cybersecurity self-assessment questionnaire, recommended courses of action to address identified vulnerabilities from the self-assessment, and means to integrate cybersecurity into existing emergency response plans. Three state-wide trainings will be held at the end of the project to introduce the new cybersecurity resources.

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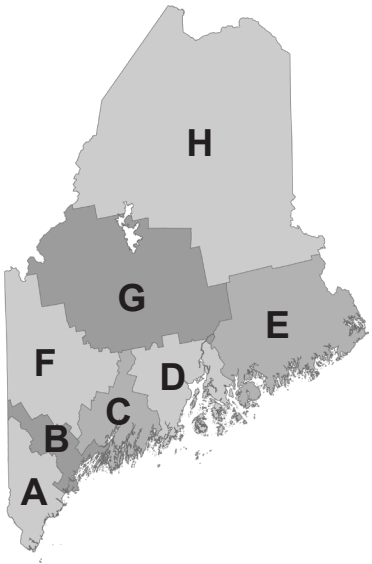

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It's Never Too Early to Start Thinking About Your CCR

Terry Trott

Community water systems are required to distribute Consumer Confidence Reports (CCRs) to all customers by July 1st every year. CCRs are an important communication tool for public water systems. They provide a recap of the previous year's water monitoring results, describe what the results mean, and relate the potential health effects of detected contaminants. The CCR is an opportunity for water systems to engage with the population they serve. It allows for informed public health choices and increases dialogue between systems and customers.

In years past, the DWP reviewed draft CCRs to ensure accurate data is presented and checked for required language. As noted in a January 2018 letter to systems, the DWP will no longer review draft CCRs. It is now the responsibility of the water system's designated operator to proofread the CCR and ensure that the data is accurate and contains the required language.

System specific fillable CCRs are available on the DWP website, www.medwp.com/pws/ccrGenerator.shtml. While the fillable CCR will meet the requirements of the CCR rule, systems are encouraged to inform consumers of any challenges and/or accomplishments of serving high quality drinking water. The CCR is a fantastic opportunity to share all the great work you are doing with your customers.

Distribution of CCRs is a vital component of the rule. A common method of CCR delivery is through a customer's water bill. For those consumers who do not receive a water bill, the water system must make a good faith effort to deliver CCRs. CCRs must be directly delivered to all served consumers.

When developing your CCR, consider the following:

- **Multi-lingual requirement** – Are 5-10% of your customers non-English speakers? If so, consider providing information on where they can access translations.
- **Electronic distribution** – Many systems are choosing to publish their CCR electronically. If you publish your CCR online, you must notify each consumer through a paper process, such as billing. Paper copies must also be made available. If you are considering electronic distribution, please review the requirements: http://bit.ly/ccrelectronicdelivery
- **Don't forget the July 1st deadline** – Remember to submit a copy of your distributed CCR to the DWP by July 1st.
- **Don't forget the October 1st deadline** – Remember to fill out and submit the CCR Certification Form to the DWP by Oct. 1st.
- **Create your best CCR** – Check out the EPA's Best Practices Factsheet for CCRs: http://bit.ly/ccrbestpractices

A note on required language

The EPA requires CCRs to contain specific language about the health effects of some contaminants. This language is meant to be a word-for-word copy and cannot be modified. For more information on language requirements visit www.epa.gov/ccr or contact your public water system inspector.

More information about CCR requirements can be found on the DWP website, www.medwp.com/consumers/ccr.shtml or on the Environmental Protection Agency's website, www.epa.gov/ccr. As always, your public water system inspector can answer any questions you may have. ■

Do I Need an Engineer for This?

Nate Saunders

The best way to describe when a professional engineer (PE) is required to review and stamp construction plans is to define when they're not required. This is what the Maine Legislature and Maine State Board of Licensure for Professional Engineers has done. The statutes describe two situations when PEs are not required to review and stamp construction plans that impact water systems. The first exemption is for cities or towns with public work construction projects that have a total project cost of less than $100,000. The second exemption is for persons engaged in the design of minor construction, particularly revisions or additions to plumbing systems, costing up to $10,000. To apply one of these exemptions as a reason a project does not require a PE to review and stamp, one must adhere to the specific language of these exemptions in the statutes (The Maine Revised Statutes, Title 32: Professions and Occupations, Chapter 19, Subchapter 1: General Provisions, § 1254 and §1255).

The exemptions described above are overseen by the Maine Board of Professional Engineering and not by the Drinking Water Program. The DWP requires a PE review and stamp for construction plans because of requirements set forth by the Maine Legislature and the Maine State Board of Licensure for Professional Engineers. The DWP cannot provide interpretations of these statutes. If you have questions on when a PE review and stamp is required, contact the Maine State Board of Licensure for Professional Engineers at 287-3236. ■

Did This Year's Winter Impact Your Source?

Sophia Scott

Despite the balmy, 70-degree day in mid-February, Maine received ample snowfall this winter, ranging from 124" in Van Buren to 86" in Cape Neddick. Whether you hate it or love it, the winter months invite many scenarios that may impact your groundwater or surface water source.

In October, a massive windstorm tore through the State, knocking out power to 470,00 people – more than the ice storm of 1998. During this storm many trees uprooted, leaving bare soils susceptible to erosion. Erosion can wash sediment and nutrients into surface waters, potentially introducing contaminants. Inspect the area surrounding your source, pay attention to the land closest to your intake. Are there many blow downs? Do you notice exposed roots or disturbed soils? If so, you may consider implementing measures to reduce erosion into your source.

If you have a groundwater source, plow trucks may not be aware of the location of your drinking water well. Take the time to walk around your well to be sure there are no cracks and that the well cap is properly sealed.

Remember, you can keep your drinking water safe by: protecting your source; taking your samples; maintaining your treatment; and inspecting your pipes and tanks.

Table 1. Total snowfall amounts (inches) across the State, 2017-2018.

	Van Buren	Bangor	Eastport	Blue Hill	Rangely	Portland	Cape Neddick
December	35.8	27.7	15.9	22.0	35.5	21.4	18.8
January	46.4	30.1	26.7	26.6	19.8	18.9	18.3
February	22.5	18.2	18.3	27.5	16.3	18.0	16.1
March	19.5	33.0	39.2	44.5*	39.3	33.1	33.4
Total	124.2	109.0	100.1	76.1	110.7	91.4	86.6

Data from National Oceanic and Atmospheric Administration
*East Surry

MWUA's Water Resource Committee Welcomes New Co-Chairs

Sophia Scott

The Maine Water Utilities Association's (MWUA) Water Resources Committee has two new co-chairs, Alisha Cooney and Mary Jane Dillingham. Alisha is a Treatment Plant Operator at the Bath Water District and Mary Jane is the Manager of Water Quality at the Maine Water Company. As co-chairs, Alisha and Mary Jane will help support the Water Resource Committee and its goal of representing water supply interests relative to source water protection and public health issues associated with drinking water. Both Alisha and Mary Jane's backgrounds make them well suited for this role.

Mary Jane grew up in Lewiston when the Androscoggin River was the recipient of waste streams from industry, agriculture, sewer overflows, residential, and more. Mary Jane recalls what it was like growing up, "My father worked as a master machinist in the Lewiston mills. He would tell us fascinating and terrifying stories about the pollution in the river. I had nightmares about it!" She credits this experience to her career choice. "The cities were always reminded of the sad state of the river on high humidity days when the foamy river's smell clouded our senses. Ultimately, my desire for clean water started then. Not to mention, I thought our drinking water came from the river!"

Alisha Cooney of the Bath Water District (left) and Mary Jane Dillingham of Maine Water (right) are the new co-chairs of MWUA's Water Resources Committee.

Alisha, earned a Bachelor of Science in Earth Science from the University of Maine in 2014. Upon graduation, she wanted a job that would incorporate what she'd learned in school with her personal interest in hydrogeology. "I submitted my resume to the Bath Water District, where I eventually was hired." When asked what she likes best about her job, Alisha replies, "I like the variety that this job brings; no day is ever the same. I am responsible for quality

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Chain of Custody

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This begins with essential information (in no particular order):

- **Type of analysis** being requested;
- **Purpose of analysis**: Indication of whether the sample result is being used for compliance or operations/ management;
- **Sample location**: Be specific about where the sample is collected, including names of individual samples to allow traceability;
- **Date and time of sampling**: This information establishes hold times for laboratory analysis;
- **Sampler's name**, as well as the name of the person responsible for sending in or handing off the sample;
- **Contact information**: This includes the name, mailing and email addresses, and phone number of both the person taking the sample and the water system;
- **Date and time sample is sent in** or handed-off, to the laboratory; and
- **Additional notes** that might be helpful information regarding the sample.

Without this information, the strength of the document's legal standing weakens, as do the analysis results. If an issue arises – if results are called into question – the process needs to be traced backward, step-by-step, following the chain of custody record. This is to establish who did what and at what point in the process, and whether the process was conducted properly. Should any of the information on the chain of custody document be found wanting – inaccurate or incomplete – the data may be found to be legally indefensible as well.

Of course, the best way to preserve legal defensibility is by making sure the data is not called into question in the first place. Take a few minutes and read over all the sampling instruction materials. Instructions will have been provided to your water system by both the Drinking Water Program and your laboratory. If the pump house is the assigned sample location, collect there; if collecting for lead/copper and the normal location can't be accessed, acquire the sample at a location further along in the system, but identify the new site on the chain of custody form; if the kitchen sink is the assigned location for bacteria collection, and nitrate collection is assigned at the wellhead, collect each sample from its assigned location. Fill out the required forms, including the chain of custody form; pay attention to detail and check for accuracy before delivering to the laboratory; and don't be afraid to ask questions. Your public water system inspector is here to help.

Accountability for the chain of custody does not lie solely with the public water system. The process of sample collection and analysis is a partnership of the system and the laboratory, each bearing responsibility for safegaurding the integrity of the process and, ultimately, public health. ■

UCMR 4 - What to Expect

Jessie Meeks

The Safe Drinking Water Act (SDWA) requires the U.S. Environmental Protection Agency to issue a new list of unregulated contaminants that public water systems must monitor for every five years. The fourth Unregulated Contaminant Monitoring Rule (UCMR4) monitoring results, along with the UCMR predecessors, will provide a basis for future regulatory actions to protect public health.

UCMR4 monitoring for the following 30 chemical contaminants will occur between 2018 and 2020:

- **10** cyanotoxins (nine cyanotoxins and one cyanotoxin group)
- **2** metals (germanium and manganese)
- **8** pesticides plus one pesticide manufacturing byproduct
- **3** brominated haloacetic acid disinfection byproducts groups (HAA5, HAA6Br, and HAA)
- **3** alcohols (1-butanol, 2-methoxyethanol, and 2-propen-1-ol)
- **3** semivolatile organic chemicals (butylated hydroxyanisole, o-toluidine, and quinoline)

All community and non-transient non-community PWSs serving more than 10,000 people must conduct UCMR4 monitoring. Only systems that source their water from surface water or groundwater under the direct influence of surface water are required to monitor for cyanotoxins. A random selection of small systems (serving <10,000 people) will monitor for the 30 contaminants under UCMR4. Transient noncommunity water systems are not required to monitor under UCMR 4. More information can be found at: http://bit.ly/UCMRInfo ■

Lead Education

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The Safe Drinking Water Act requires the distribution of information related to the potential health impacts of lead in many situations, including: when sampled taps exceed in scheduled lead and copper testing, when a PWS has a lead action level exceedance, in Consumer Confidence Reports, and under the Water Infrastructure for Improvements to the Nation (WIIN) Act.

The table below describes the who, what, and when for lead public education.

	WHO *Who do you distribute the lead education materials to?*	**WHEN** *When must you distirbute the lead education material?*	**WHAT** *What must be included in the education material?*					
			MLCG, AL definitions	Health effects	Ways to reduce exposure	Steps system is taking to mitigate lead concentrations	Necessity of seeking alternative water supplies	PWS contact information
Lead Consumer Notification	All customers that particpated or had taps sampled.*	Within 30 days of receiving results.◆	✓	✓	✓			✓
When a PWS exceeds (Public Education)	All customers.	Within 60 days of the end of the compliance period.	✓	✓	✓	✓	✓	✓
Consumer Confidence Report	All customers.	Annually by July 1.	✓	✓	✓			✓
WIIN Act	Individuals reporting an exceedance to EPA. *The DWP and EPA must also be notified once individuals have been contacted.*	2-5 days after the system learns EPA has been contacted.	✓	✓	✓	✓†	✓	✓

* If taps were sampled in a school or office building, the results must be posted so everyone in the building can see them.
◆Sample results must also be shared.
†System must also report its most recent 90th percentile lead results.

New Comittee Co-chairs

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assurance for our in-house lab at Bath Water District. This means that I take and submit the samples to labs that can run the samples or I run the samples myself. I ensure that safe drinking water is delivered to our distribution system, which includes monitoring of our source water. I monitor Nequasset lake with the Volunteer Lake Monitoring Program. The best way to ensure quality water from your source is to have a source protection program in place."

When asked the same question, Mary Jane recounts, "The nature of my positions have always focused on protection of sources. I especially enjoy educating others about the work that so many of us quietly do to protect our waters and I very much enjoy giving young people the experience of our profession."

The new co-chairs have exciting ideas for the Water Resources Committee. Alisha would like to see more education on water quality, from taste and odor issues to how source protection can mitigate issues, to more recent health concerns and trends. Mary Jane notes that the Water Resources Committee has moved in a direction of networking, not only with peers in the drinking water world, but has also made connections with other agencies and groups that share a similar mission. She says, "I would like to see our committee creating a solid platform for connections with even more groups. Clean water benefits everyone!"

Clearly, with these two at the helm, the Water Resource Committee is in good hands.

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