

# Attention Surface Water Treatment Plants:

## Second Round of LT2 Source Water Monitoring is Approaching!

If you operate a surface water treatment plant, depending on the population that you serve, you have either already begun or will soon begin the second round of source water monitoring required by the Long Term 2 Enhanced Surface Water Treatment Rule (LT2). If you are thinking, “Wait a minute, second round? I don’t remember what happened during the first round,” let’s review.

The LT2 rule was finalized in January 2006 and requires surface water treatment systems to monitor their source water for *E.coli* and/or *Cryptosporidium* and use the results to determine if their source is vulnerable to contamination and may require additional treatment to improve public health protection. The timeline of monitoring and reporting requirements are on a staggered schedule based on the population served by the system. Schedule 1 systems serve 100,000 or more people, Schedule 2 systems serve 50,000 – 99,999 people, Schedule 3 systems serve 10,000 – 49,999 people, and Schedule 4 systems serve less than 10,000 people. Wholesale systems use the population of their largest purchasing system to determine their schedule. See Table 1 for a summary of monitoring/reporting requirements.

For the first round of source water monitoring, systems on Schedules 1, 2 and 3 were required to conduct 24 months of *Cryptosporidium*, *E.coli*, and turbidity monitoring. Schedule 4 systems had the option of 12 months of bi-weekly *E.coli* monitoring. If the average of these 26 samples exceeded the trigger levels of 10 *E.coli*/100 mL for lake/reservoir sources or 50 *E.coli*/100 mL for flowing stream sources, systems would be required to monitor their source(s) for *Cryptosporidium* – either twice per month for 12 months or once per month for 24 months. Once the first round of source water monitoring was completed, systems were required to calculate the average number of *Cryptosporidium* oocysts to determine their Bin Classification (see Table 2). Schedule 4 systems that did not exceed the *E.coli* trigger level were placed in bin 1. No additional treatment was required for systems with a bin 1 classification. Systems in bins 2, 3, or 4 were required to provide additional treatment using treatment options from the “microbial toolbox.” According

Table 1

Schedule (Population Served)	Begin First Round Monitoring	Submit Bin Classification	Install Treatment	Begin Second Round Monitoring
Schedule 1 (≥100,000)	October 2006	April 1, 2009	April 1, 2012	April 2015
Schedule 2 (50,000-99,999)	April 2007	October 1, 2009	October 1, 2012	October 2015
Schedule 3 (10,000-49,999)	April 2008	October 1, 2010	October 1, 2013	October 2016
Schedule 4 (<10,000) * <i>E. coli</i> monitoring	October 2008			October 2017
Schedule 4 (<10,000) * <i>Crypto.</i> monitoring	April 2010	October 1, 2012	October 1, 2014	April 2019



There are two options for *Cryptosporidium* sample collection. The first option is to collect a bulk sample, which is ten liters of raw source water, prior to any treatment.

**Table 2**

Cryptosporidium Concentration	Bin Classification	Additional Treatment Required			
		Conventional Filtration	Direct Filtration	Slow Sand or Diatomaceous Earth Filtration	Alternative Filtration
< 0.075 oocysts/L	1	No additional treatment required			
0.075 - < 1.0 oocysts/L	2	1-log treatment	1.5-log treatment	1-log treatment	As determined by KDHE
1.0 - < 3.0 oocysts/L	3	2-log treatment	2.5-log treatment	2-log treatment	As determined by KDHE
≥ 3.0 oocysts/L	4	2.5-log treatment	3-log treatment	2.5-log treatment	As determined by KDHE

\*Systems serving < 10,000 and not required to monitor for *Cryptosporidium* automatically classified in Bin 1.



to the Kansas Department of Health and Environment (KDHE), as a result of the first round of source water monitoring, there were no systems classified as bin 3 or bin 4, however, 14 systems were classified as bin 2.

**Second round of source water monitoring**

As indicated on the far right column of Table 1, Schedule 1 and 2 systems have already started the second round of source water monitoring. Schedule 3 systems must begin monitoring no later than October 2016 and Schedule 4 systems must begin monitoring no later than October 2017. **At least three months before systems begin collecting LT2 source water samples, the following documents must be submitted to KDHE for review and approval:**

1. A map, sketch, or schematic of the raw source water collection site along with a narrative description. The collection site must be prior to any treatment, and for

systems that recycle their filter backwash, prior to the addition of filter backwash.

2. For Schedule 4 systems, a statement indicating if the system is choosing to conduct *E.coli* monitoring, or intends to forgo *E.coli* monitoring and conduct *Cryptosporidium* monitoring.

3. A statement indicating what laboratory services the system intends to use – Kansas Health and Environmental Laboratories (KHEL) or a Kansas certified private laboratory. If contracting with a private laboratory, the

**The second option for *Cryptosporidium* sample collection is to use an approved filter, such as Filta-Max or Envirochek, to filter at least 10 liters of raw source water and return to the laboratory. It is important to discuss LT2 sample collection options and procedures with your contract private laboratory.**

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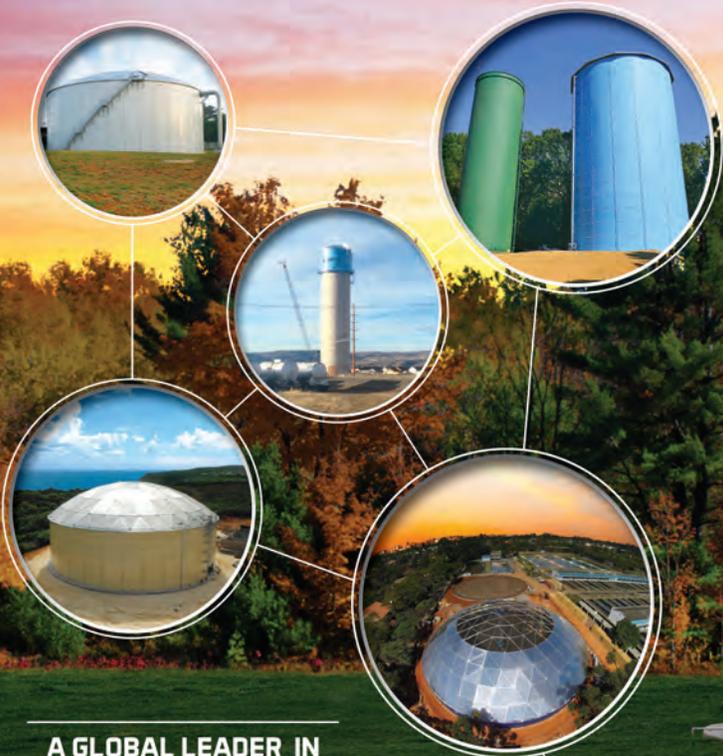
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