



# Long Term 2 Enhanced Surface Water Treatment (LT2) Rule

## A Quick Reference Guide for Schedule 4 Systems

### Purposes of Rule:

Improve public health protection through the control of microbial contaminants by focusing on systems with elevated *Cryptosporidium* risk. Prevent significant increases in microbial risk that might otherwise occur when systems implement the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR).

### General Description of Rule:

The LT2 Rule requires systems to monitor their source water, calculate an average *Cryptosporidium* concentration, and use those results to determine if their source is vulnerable to contamination and may require additional treatment.

### Applicability of Rule:

The LT2 Rule applies to all public water systems (PWSs) that use surface water. The timeline for the rule requirements varies depending on which schedule the water system is placed into and there are a total of four schedules. Schedule 4 systems include PWSs serving less than 10,000 people OR wholesale PWSs that are part of a combined distribution system in which the largest system serves less than 10,000 people.

### General Description of Rule:

#### Source Water Monitoring

Surface water systems shall conduct 12 months of source water monitoring for *E. coli*. The system shall sample their source water for *E. coli* at least once every two weeks for the 12 month period. If the *E. coli* trigger level is exceeded, the system shall conduct an additional 12 to 24 months of source water monitoring for *Cryptosporidium*. The System may avoid *E. coli* monitoring if the system notifies Ohio EPA that it will conduct 12 to 24 months of source water monitoring for *Cryptosporidium*.

Surface water systems providing at least 5.5 log of treatment for *Cryptosporidium* and those systems that intend to install this level of treatment are not required to conduct source water monitoring.

#### Installation of Additional Treatment

Surface water systems shall provide additional treatment for *Cryptosporidium* based on their bin classification (average source water *Cryptosporidium* concentration), using treatment options from the “microbial toolbox.”

#### Disinfection Profiling and Benchmarking

Any system that plans on making a significant change to their disinfection practices shall:

- Create disinfection profiles for *Giardia lamblia* and viruses;
- Calculate a disinfection benchmark; and,
- Consult with Ohio EPA prior to making a significant change in disinfection practice.

### Bin Classification

<i>Cryptosporidium</i> Concentration (oocysts/L)	Bin Classification	Conventional Treatment	Direct Filtration	Slow Sand or Diatomaceous Earth Filtration	Alternative Filtration
<0.075	Bin 1	No additional treatment required	No additional treatment required	No additional treatment required	No additional treatment required
0.075 to < 1	Bin 2	1 log	1.5 log	1 log	(1)
1.0 to < 3.0	Bin 3	2 log	2.5 log	2 log	(2)
> or = to 3.0	Bin 4	2.5 log	3 log	2.5 log	(3)

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- (1) As determined by Ohio EPA such that the total removal/inactivation is at least 4.0-log.
- (2) As determined by Ohio EPA such that the total removal/inactivation is at least 5.0-log.
- (3) As determined by Ohio EPA such that the total removal/inactivation is at least 5.5-log.

### Rule Timeline

<a href="#">Schedule 4 Systems</a> (PWSs serving less than 10,000 people OR wholesale PWSs that are part of a combined distribution system in which the largest system serves less than 10,000 people)	
<b>&lt;10,000 and monitor for <i>E. coli</i></b>	
Date	Milestone
July 1, 2017	Systems shall submit: Completed sampling plan which includes a schedule that specifies the dates of sample collection and location of sampling for the second round of source water monitoring to Ohio EPA; or Notice to Ohio EPA of the system's intent to monitor for <i>Cryptosporidium</i> instead of <i>E. coli</i> counts; or Notice to Ohio EPA of the system's intent to provide at least 5.5-log of treatment for <i>Cryptosporidium</i> . Systems should consult with Ohio EPA prior to submitting this notice.
October 2017	No later than this month, systems shall begin 12 months of source water monitoring. Systems shall sample their source water for <i>E. coli</i> at least once every two weeks for the 12 month period.
December 10, 2017	Systems submit results for first month of source water monitoring. (Results for monthly samples shall be submitted no later than 10 days after the end of the first month following the month when the sample is collected.)
September 2018	No later than this month, systems shall complete their second round of source water monitoring.
<b>&lt;10,000 and monitor for <i>Cryptosporidium</i></b>	
January 1, 2019	System shall submit: Completed sampling plan which includes a schedule that specifies the dates of sample collection and location of sampling for the second round of source water monitoring to Ohio EPA; or Notice to Ohio EPA of the system's intent to provide at least 5.5-log of treatment for <i>Cryptosporidium</i> . Systems should consult with Ohio EPA prior to submitting this notice.
April 1, 2019	No later than this month, systems shall begin source water monitoring for <i>Cryptosporidium</i> . System shall sample their source water for <i>Cryptosporidium</i> at least twice per month for 12 months or at least monthly for 24 months.
March 2020	Source monitoring shall be complete for systems which chose 12 months of monitoring, twice per month and the bin report shall be submitted by October 1, 2020.
March 2021	Source monitoring shall be complete for systems which chose 24 months of monitoring, once per month. The bin report shall be submitted by October 1, 2021.
<b>If the second round bin classification moves the system to a bin that requires additional treatment the following is applicable:</b>	
Within six months of receiving the director's approval of bin classification	Systems shall submit a general plan indicating the system's plan for complying with any additional <i>Cryptosporidium</i> inactivation and/or removal requirements. A timeline for project completion must be included.
Systems shall install and operate additional treatment in accordance with their bin classification and the schedule the director approves.	

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## Contact

For additional information on the LT2 Rule, contact your Ohio EPA Division of Drinking and Ground Waters LT2 representative:

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