

Table IV-3 presents the credit proposed for different types of plants towards LT2ESWTR *Cryptosporidium* treatment requirements. As described in section IV.C.18, a State may award greater credit to a system that

demonstrates through a State-approved protocol that it reliably achieves a higher level of *Cryptosporidium* removal. Conversely, a State may award less credit to a system where the State determines, based on site specific

information, that the system is not achieving the degree of *Cryptosporidium* removal indicated in Table IV-3.

TABLE IV-3.—*Cryptosporidium* TREATMENT CREDIT TOWARDS LT2ESWTR REQUIREMENTS ¹

Plant type	Conventional treatment (includes softening)	Direct filtration	Slow sand or diatomaceous earth filtration	Alternative filtration technologies
Treatment credit	3.0 log	2.5 log	3.0 log	Determined by State ² .

¹ Applies to plants in full compliance with the SWTR, IESWTR, and LT1ESWTR as applicable

² Credit must be determined through product or site specific assessment

iii. Treatment requirements associated with LT2ESWTR bins

The treatment requirements associated with LT2ESWTR risk bins are shown in Table IV-4. The total *Cryptosporidium* treatment required for Bins 2, 3, and 4 is 4.0 log, 5.0 log, and 5.5 log, respectively. For conventional (including softening), slow sand, and DE plants that receive 3.0 log credit for

compliance with current regulations, additional *Cryptosporidium* treatment of 1.0 to 2.5 log is required when classified in Bins 2-4. Direct filtration plants that receive 2.5 log credit for compliance with current regulations must achieve 1.5 to 3.0 log of additional *Cryptosporidium* treatment in Bins 2-4.

For systems using alternative filtration technologies, such as

membranes or bag/cartridge filters, and classified in Bins 2-4, the State must determine additional treatment requirements based on the credit awarded to a particular technology. The additional treatment must be such that plants classified in Bins 2, 3, and 4 achieve the total required *Cryptosporidium* reductions of 4.0, 5.0, and 5.5 log, respectively.

TABLE IV-4.—TREATMENT REQUIREMENTS PER LT2ESWTR BIN CLASSIFICATION

If your bin classification is . . .	And you use the following filtration treatment in full compliance with the SWTR, IESWTR, and LT1ESWTR (as applicable), then your additional treatment requirements are . . .			
	Conventional filtration treatment (includes softening)	Direct filtration	Slow sand or diatomaceous earth filtration	Alternative filtration technologies
Bin 1	No additional treatment	No additional treatment	No additional treatment	No additional treatment.
Bin 2	1 log treatment ¹	1.5 log treatment ¹	1 log treatment ¹	As determined by the State ^{1, 3} .
Bin 3	2 log treatment ²	2.5 log treatment ²	2 log treatment ²	As determined by the State ^{2, 4} .
Bin 4	2.5 log treatment ²	3 log treatment ²	2.5 log treatment ²	As determined by the State ^{2, 5} .

¹ Systems may use any technology or combination of technologies from the microbial toolbox.

² Systems must achieve at least 1 log of the required treatment using ozone, chlorine dioxide, UV, membranes, bag/cartridge filters, or bank filtration.

³ Total *Cryptosporidium* removal and inactivation must be at least 4.0 log.

⁴ Total *Cryptosporidium* removal and inactivation must be at least 5.0 log.

⁵ Total *Cryptosporidium* removal and inactivation must be at least 5.5 log.

Plants can achieve additional *Cryptosporidium* treatment credit through implementing pretreatment processes like presedimentation or bank filtration, by developing a watershed control program, and by applying additional treatment steps like UV, ozone, chlorine dioxide, and membranes. In addition, plants can receive additional credit for existing treatment through achieving very low filter effluent turbidity or through a demonstration of performance. Section IV.C presents criteria for awarding *Cryptosporidium* treatment credit to a host of treatment and control options, including those listed here and others, which are collectively termed the “microbial toolbox”.

Systems in Bin 2 can meet additional *Cryptosporidium* treatment requirements through using any option or combination of options from the microbial toolbox. In Bins 3 and 4, systems must achieve at least 1 log of the additional treatment requirement through using ozone, chlorine dioxide, UV, membranes, bag filtration, cartridge filtration, or bank filtration.

d. *Use of previously collected data.* Today’s proposal allows systems with previously collected *Cryptosporidium* data (i.e., data collected prior to the required start of monitoring under the LT2ESWTR) that are equivalent in sample number, frequency, and data quality to data that will be collected under the LT2ESWTR to use those data in lieu of conducting new monitoring.

Specifically, EPA is proposing that *Cryptosporidium* sample analysis results collected prior to promulgation of the LT2ESWTR must meet the following criteria to be used for bin classification:

- Samples were analyzed by laboratories using validated versions of EPA Methods 1622 or 1623 and meeting the quality control criteria specified in these methods (USEPA 1999a, USEPA 1999b, USEPA 2001e, USEPA 2001f).

- Samples were collected no less frequently than each calendar month on a regular schedule, beginning no earlier than January 1999 (when EPA Method 1622 was first released as an interlaboratory-validated method).

- Samples were collected in equal intervals of time over the entire collection period (e.g., weekly,