

TABLE III-3.—SUMMARY OF INFORMATION COLLECTION RULE *Cryptosporidium* MODELED SOURCE WATER DATA FOR UNFILTERED AND FILTERED PLANTS

Source	Information collection rule modeled plant-mean (oocysts/L)		
	Mean	Median	90th percentile
Unfiltered	0.014	0.0079	0.033
Filtered	0.59	0.052	1.4

The median *Cryptosporidium* occurrence level for unfiltered systems in the Information Collection Rule was 0.0079 oocysts/L, which is close to the median level of 0.01 oocysts/L reported for unfiltered systems in the IESWTR (Montgomery Watson, 1995). However, the Information Collection Rule data do not show the 2 log difference in median *Cryptosporidium* levels between filtered and unfiltered systems that was observed for the data used in the IESWTR. The ratio of median plant-mean occurrence in unfiltered plants to filtered plants is about 1:7 (see Table III-3). Thus, based on an assumption of a minimum 2 log removal of *Cryptosporidium* by filtration plants (as required by the IESWTR and LT1ESWTR), these data indicate that, on average, finished water oocysts levels are higher in unfiltered systems than in filtered systems.

b. *ICRSS results.* Figures III-3 and III-4 present plant-mean *Cryptosporidium*

levels for ICRSS medium and large systems, respectively, as cumulative distributions. Medium and large system data were analyzed separately to identify differences between the two data sets. Similar to the Information Collection Rule data plot, Figures III-3 and III-4 include distributions for both the observed raw data adjusted for mean analytical method recovery of 43% and the modeled estimate of the underlying distribution, along with 90% confidence bounds. The observed and modeled distributions are similar for the 85% of ICRSS plants that detected *Cryptosporidium*, and the modeled distribution allows for estimation of *Cryptosporidium* concentrations for source waters where oocysts may have been present but were not detected.

Plant-mean *Cryptosporidium* concentrations for large and medium systems in the ICRSS are similar at the mid and lower range of the distribution and differ at the upper end. ICRSS

medium and large systems both had median plant-mean *Cryptosporidium* levels of approximately 0.05 oocysts/L, which is close to the median oocyst level in the Information Collection Rule data set as well. However, the 90th percentile plant-mean was 0.33 oocysts/L for ICRSS medium systems and 0.24 oocysts/L for ICRSS large systems. Note that in the Information Collection Rule distribution, the 90th percentile *Cryptosporidium* concentration is 1.3 oocysts/L, which is significantly higher than either the ICRSS medium or large system distribution.

The reasons for different results between the surveys are not well understood, but may stem from year-to-year variation in occurrence, systematic differences in the sampling or measurement methods employed, and differences in the populations sampled. This topic is discussed further at the end of this section.

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