

(4) Systems with uncovered finished water storage facilities must comply with the requirements to cover the facility or treat the discharge from the facility as described in § 141.714.

(5) Systems required to provide additional treatment for *Cryptosporidium* must implement microbial toolbox options that are designed and operated as described in §§ 141.715 through 141.720.

(6) Systems must comply with the applicable recordkeeping and reporting requirements described in §§ 141.721 through 141.722.

(7) Systems must address significant deficiencies identified in sanitary surveys performed by EPA as described in § 141.723.

**Source Water Monitoring Requirements**

**§ 141.701 Source water monitoring.**

(a) *Initial round of source water monitoring.* Systems must conduct the following monitoring on the schedule in paragraph (c) of this section unless they meet the monitoring exemption criteria in paragraph (d) of this section.

(1) Filtered systems serving at least 10,000 people must sample their source water for *Cryptosporidium*, *E. coli*, and turbidity at least monthly for 24 months.

(2) Unfiltered systems serving at least 10,000 people must sample their source water for *Cryptosporidium* at least monthly for 24 months.

(3)(i) Filtered systems serving fewer than 10,000 people must sample their source water for *E. coli* at least once every two weeks for 12 months.

(ii) A filtered system serving fewer than 10,000 people may avoid *E. coli* monitoring if the system notifies the State that it will monitor for *Cryptosporidium* as described in paragraph (a)(4) of this section. The system must notify the State no later than 3 months prior to the date the system is otherwise required to start *E. coli* monitoring under § 141.701(c).

(4) Filtered systems serving fewer than 10,000 people must sample their source water for *Cryptosporidium* at least twice per month for 12 months or at least monthly for 24 months if they meet one of the following, based on monitoring conducted under paragraph (a)(3) of this section:

(i) For systems using lake/reservoir sources, the annual mean *E. coli* concentration is greater than 10 *E. coli*/100 mL.

(ii) For systems using flowing stream sources, the annual mean *E. coli* concentration is greater than 50 *E. coli*/100 mL.

(iii) The system does not conduct *E. coli* monitoring as described in paragraph (a)(3) of this section.

(iv) Systems using ground water under the direct influence of surface water (GWUDI) must comply with the requirements of paragraph (a)(4) of this section based on the *E. coli* level that applies to the nearest surface water body. If no surface water body is nearby, the system must comply based on the requirements that apply to systems using lake/reservoir sources.

(5) For filtered systems serving fewer than 10,000 people, the State may

approve monitoring for an indicator other than *E. coli* under paragraph (a)(3) of this section. The State also may approve an alternative to the *E. coli* concentration in paragraph (a)(4)(i), (ii) or (iv) of this section to trigger *Cryptosporidium* monitoring. This approval by the State must be provided to the system in writing and must include the basis for the State's determination that the alternative indicator and/or trigger level will provide a more accurate identification of whether a system will exceed the Bin 1 *Cryptosporidium* level in § 141.710.

(6) Unfiltered systems serving fewer than 10,000 people must sample their source water for *Cryptosporidium* at least twice per month for 12 months or at least monthly for 24 months.

(7) Systems may sample more frequently than required under this section if the sampling frequency is evenly spaced throughout the monitoring period.

(b) *Second round of source water monitoring.* Systems must conduct a second round of source water monitoring that meets the requirements for monitoring parameters, frequency, and duration described in paragraph (a) of this section, unless they meet the monitoring exemption criteria in paragraph (d) of this section. Systems must conduct this monitoring on the schedule in paragraph (c) of this section.

(c) *Monitoring schedule.* Systems must begin the monitoring required in paragraphs (a) and (b) of this section no later than the month beginning with the date listed in this table:

**SOURCE WATER MONITORING STARTING DATES TABLE**

Systems that serve . . .	Must begin the first round of source water monitoring no later than the month beginning . . .	And must begin the second round of source water monitoring no later than the month beginning . . .
(1) At least 100,000 people .....	(i) October 1, 2006 .....	(ii) April 1, 2015.
(2) From 50,000 to 99,999 people .....	(i) April 1, 2007 .....	(ii) October 1, 2015.
(3) From 10,000 to 49,999 people .....	(i) April 1, 2008 .....	(ii) October 1, 2016.
(4) Fewer than 10,000 and monitor for <i>E. coli</i> <sup>a</sup>	(i) October 1, 2008 .....	(ii) October 1, 2017.
(5) Fewer than 10,000 and monitor for <i>Cryptosporidium</i> <sup>b</sup> .	(i) April 1, 2010 .....	(ii) April 1, 2019.

<sup>a</sup> Applies only to filtered systems.

<sup>b</sup> Applies to filtered systems that meet the conditions of paragraph (a)(4) of this section and unfiltered systems.

(d) *Monitoring avoidance.* (1) Filtered systems are not required to conduct source water monitoring under this subpart if the system will provide a total of at least 5.5-log of treatment for *Cryptosporidium*, equivalent to meeting the treatment requirements of Bin 4 in § 141.711.

(2) Unfiltered systems are not required to conduct source water monitoring under this subpart if the

system will provide a total of at least 3-log *Cryptosporidium* inactivation, equivalent to meeting the treatment requirements for unfiltered systems with a mean *Cryptosporidium* concentration of greater than 0.01 oocysts/L in § 141.712.

(3) If a system chooses to provide the level of treatment in paragraph (d)(1) or (2) of this section, as applicable, rather than start source water monitoring, the

system must notify the State in writing no later than the date the system is otherwise required to submit a sampling schedule for monitoring under § 141.702. Alternatively, a system may choose to stop sampling at any point after it has initiated monitoring if it notifies the State in writing that it will provide this level of treatment. Systems must install and operate technologies to provide this level of treatment by the

applicable treatment compliance date in § 141.713.

(e) *Plants operating only part of the year.* Systems with subpart H plants that operate for only part of the year must conduct source water monitoring in accordance with this subpart, but with the following modifications:

(1) Systems must sample their source water only during the months that the plant operates unless the State specifies another monitoring period based on plant operating practices.

(2) Systems with plants that operate less than six months per year and that monitor for *Cryptosporidium* must collect at least six *Cryptosporidium* samples per year during each of two years of monitoring. Samples must be evenly spaced throughout the period the plant operates.

(f)(1) *New sources.* A system that begins using a new source of surface water or GWUDI after the system is required to begin monitoring under paragraph (c) of this section must monitor the new source on a schedule the State approves. Source water monitoring must meet the requirements of this subpart. The system must also meet the bin classification and *Cryptosporidium* treatment requirements of §§ 141.710 and 141.711 or § 141.712, as applicable, for the new source on a schedule the State approves.

(2) The requirements of § 141.701(f) apply to subpart H systems that begin operation after the monitoring start date applicable to the system's size under paragraph (c) of this section.

(3) The system must begin a second round of source water monitoring no later than 6 years following initial bin classification under § 141.710 or determination of the mean *Cryptosporidium* level under § 141.712, as applicable.

(g) Failure to collect any source water sample required under this section in accordance with the sampling schedule, sampling location, analytical method, approved laboratory, and reporting requirements of §§ 141.702 through 141.706 is a monitoring violation.

(h) *Grandfathering monitoring data.* Systems may use (grandfather) monitoring data collected prior to the applicable monitoring start date in paragraph (c) of this section to meet the initial source water monitoring requirements in paragraph (a) of this section. Grandfathered data may substitute for an equivalent number of months at the end of the monitoring period. All data submitted under this paragraph must meet the requirements in § 141.707.

#### § 141.702 Sampling schedules.

(a) Systems required to conduct source water monitoring under § 141.701 must submit a sampling schedule that specifies the calendar dates when the system will collect each required sample.

(1) Systems must submit sampling schedules no later than 3 months prior to the applicable date listed in § 141.701(c) for each round of required monitoring.

(2)(i) Systems serving at least 10,000 people must submit their sampling schedule for the initial round of source water monitoring under § 141.701(a) to EPA electronically at <https://intranet.epa.gov/lt2/>.

(ii) If a system is unable to submit the sampling schedule electronically, the system may use an alternative approach for submitting the sampling schedule that EPA approves.

(3) Systems serving fewer than 10,000 people must submit their sampling schedules for the initial round of source water monitoring § 141.701(a) to the State.

(4) Systems must submit sampling schedules for the second round of source water monitoring § 141.701(b) to the State.

(5) If EPA or the State does not respond to a system regarding its sampling schedule, the system must sample at the reported schedule.

(b) Systems must collect samples within two days before or two days after the dates indicated in their sampling schedule (i.e., within a five-day period around the schedule date) unless one of the conditions of paragraph (b)(1) or (2) of this section applies.

(1) If an extreme condition or situation exists that may pose danger to the sample collector, or that cannot be avoided and causes the system to be unable to sample in the scheduled five-day period, the system must sample as close to the scheduled date as is feasible unless the State approves an alternative sampling date. The system must submit an explanation for the delayed sampling date to the State concurrent with the shipment of the sample to the laboratory.

(2)(i) If a system is unable to report a valid analytical result for a scheduled sampling date due to equipment failure, loss of or damage to the sample, failure to comply with the analytical method requirements, including the quality control requirements in § 141.704, or the failure of an approved laboratory to analyze the sample, then the system must collect a replacement sample.

(ii) The system must collect the replacement sample not later than 21 days after receiving information that an

analytical result cannot be reported for the scheduled date unless the system demonstrates that collecting a replacement sample within this time frame is not feasible or the State approves an alternative resampling date. The system must submit an explanation for the delayed sampling date to the State concurrent with the shipment of the sample to the laboratory.

(c) Systems that fail to meet the criteria of paragraph (b) of this section for any source water sample required under § 141.701 must revise their sampling schedules to add dates for collecting all missed samples. Systems must submit the revised schedule to the State for approval prior to when the system begins collecting the missed samples.

#### § 141.703 Sampling locations.

(a) Systems required to conduct source water monitoring under § 141.701 must collect samples for each plant that treats a surface water or GWUDI source. Where multiple plants draw water from the same influent, such as the same pipe or intake, the State may approve one set of monitoring results to be used to satisfy the requirements of § 141.701 for all plants.

(b)(1) Systems must collect source water samples prior to chemical treatment, such as coagulants, oxidants and disinfectants, unless the system meets the condition of paragraph (b)(2) of this section.

(2) The State may approve a system to collect a source water sample after chemical treatment. To grant this approval, the State must determine that collecting a sample prior to chemical treatment is not feasible for the system and that the chemical treatment is unlikely to have a significant adverse effect on the analysis of the sample.

(c) Systems that recycle filter backwash water must collect source water samples prior to the point of filter backwash water addition.

(d) *Bank filtration.* (1) Systems that receive *Cryptosporidium* treatment credit for bank filtration under § 141.173(b) or § 141.552(a), as applicable, must collect source water samples in the surface water prior to bank filtration.

(2) Systems that use bank filtration as pretreatment to a filtration plant must collect source water samples from the well (i.e., after bank filtration). Use of bank filtration during monitoring must be consistent with routine operational practice. Systems collecting samples after a bank filtration process may not receive treatment credit for the bank filtration under § 141.717(c).