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3745-81-65 Source monitoring requirements.

(A) Initial round of source water monitoring.

Systems shall conduct the following monitoring on the schedule in paragraph (C) of this rule unless they meet the monitoring exemption criteria in paragraph (D) of this rule.

(1) Systems serving at least ten thousand people shall sample their source water for Cryptosporidium, E. coli, and turbidity at least monthly for twenty-four months.

(2) Systems serving less than ten thousand people shall sample their source water for E. coli at least once every two weeks for twelve months.

(3) Systems serving less than ten thousand people may avoid E. coli monitoring if the system notifies the director that it will monitor for Cryptosporidium as described in paragraph (A)(4) of this rule. The system shall notify the director no later than three months prior to the date the system is otherwise required to start E. coli monitoring under paragraph (C) of this rule.

(4) Systems serving less than ten thousand people shall sample their source water for Cryptosporidium at least twice per month for twelve months or at least monthly for twenty-four months if they meet one of the following, based on monitoring conducted under paragraph (A)(2) of this rule:

(a) For systems using lake/reservoir sources, the annual mean E. coli concentration is greater than ten E. coli per one hundred milliliters.

(b) For systems using flowing stream sources, the annual mean E. coli concentration is greater than fifty E. coli per one hundred milliliters.

(c) The system does not conduct E. coli monitoring as described in paragraph (A)(2) of this rule.

(d) Systems using ground water under the direct influence of surface water as defined by rule 3745-81-01 of the Administrative Code shall comply with the requirements of paragraph (A)(4) of this rule based on the E. coli level that applies to the nearest surface water body. If no surface water body is nearby, the system shall comply based on the requirements that apply to systems using lake/reservoir sources.

(5) For systems serving less than ten thousand people, the director may accept monitoring for an indicator other than E. coli under paragraph (A)(2) of this rule. The director also may accept an alternative to the E. coli concentration in paragraph (A)(4) of this rule to trigger Cryptosporidium monitoring. This

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acceptance by the director shall be provided to the system in writing and shall include the basis for the director'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 paragraphs (A) to (D) of rule 3745-81-67 of the Administrative Code.

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

(B) Second round of source water monitoring.

Systems shall conduct a second round of source water monitoring that meets the requirements for monitoring parameters, frequency, and duration described in paragraph (A) of this rule, unless they meet the monitoring exemption criteria in paragraph (D) of this rule. Systems shall conduct this monitoring in accordance with the schedule in paragraph (C) of this rule.

(C) Monitoring schedule.

Systems shall begin the monitoring required in paragraphs (A) and (B) of this rule no later than the month beginning with the date listed in this table:

-Source Water Monitoring Starting Date Tables-

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

* Applies to systems that meet the conditions of paragraph (A)(4) of this rule.

(D) Monitoring avoidance.

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(1) Systems are not required to conduct source water monitoring under this rule 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 paragraph (E) of rule 3745-81-67 of the Administrative Code.

(2) If a system chooses to provide the level of treatment in paragraph (D)(1) of this rule, as applicable, rather than start source water monitoring, the system shall notify the director in writing no later than the date the system is otherwise required to submit a sampling schedule for monitoring in accordance with paragraph (I) of this rule. Alternatively, a system may choose to stop sampling at any point after it has initiated monitoring if it notifies the director in writing that it will provide this level of treatment. Systems shall install and operate technologies to provide this level of treatment by the applicable treatment compliance date in paragraph (F) of rule 3745-81-67 of the Administrative Code. The system shall obtain plan approval of the treatment process scheme which provides at least 5.5 log of treatment. The director may require additional performance monitoring and reporting.

(E) Plants operating only part of the year.

Systems that operate for only part of the year shall conduct source water monitoring in accordance with this rule with the following modifications:

(1) Systems shall sample their source water only during the months that the plant operates unless the director 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 shall collect at least six Cryptosporidium samples per year during each of two years of monitoring. Samples shall be evenly spaced throughout the period the plant operates.

(F) New sources.

Source water monitoring of new sources shall meet the requirements of this rule unless the system meets the requirements of paragraph (D) of this rule. The system shall also meet the bin classification and Cryptosporidium treatment requirements of paragraphs (A) to (E) of rule 3745-81-67 of the Administrative Code, as applicable, for the new source on a schedule the director approves.

(1) An existing system that begins using a new source of surface water after the system is required to begin monitoring in accordance with paragraph (C) of this rule, shall monitor the new source on a schedule the director approves.

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(2) A new system that begins operation using a new source after the monitoring date applicable to the system's size in accordance with paragraph (C) of this rule shall monitor the new source on a schedule the director approves.

(3) The system shall begin a second round of source water monitoring no later than six years following initial bin classification in accordance with paragraphs (A) to (D) of rule 3745-81-67 of the Administrative Code.

(G) Failure to collect any source water sample required under this rule in accordance with the sampling schedule, sampling location, analytical method, approved laboratory, and reporting requirements of paragraphs (I) to (K) of this rule, paragraphs (H) to (J) of rule 3745-81-27, rule 3745-89-11, and paragraph (A) of rule 3745-81-66 of the Administrative Code, is a monitoring violation.

(H) Grandfathering monitoring data.

Systems may use (grandfather) monitoring data collection prior to the applicable monitoring start date in paragraph (C) of this rule to meet the initial source water monitoring requirements in paragraph (A) of this rule. Grandfathered data may substitute for an equivalent number of months at the end of the monitoring period. All data submitted under this paragraph shall meet the requirements in paragraph (B) of rule 3745-81-66 of the Administrative Code.

(I) Sampling schedules.

(1) Systems required to conduct source water monitoring in accordance with paragraphs (A) to (H) of this rule shall submit a sampling schedule that specifies the calendar dates when the system will collect each required sample.

(a) Systems shall submit sampling schedules no later than three months prior to the applicable date listed in paragraph (C) of this rule for each round of required monitoring.

(b) Systems serving at least ten thousand people shall submit their sampling schedule for the initial round of source water monitoring in accordance with paragraph (A) of this rule to U.S. EPA electronically at <https://intranet.epa.gov/lt2/>. If a system is unable to submit the sampling schedule electronically, the system may use an alternative approach for submitting the sampling schedule that U.S. EPA approves.

(c) Systems serving less than ten thousand people shall submit their sampling schedules for the initial round of source water monitoring required by paragraph (A) of this rule to U.S. EPA.

(d) Systems shall submit sampling schedules for the second round of source water monitoring required by paragraph (B) of this rule to the director.

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- (e) If U.S. EPA or the director does not respond to a system regarding its sampling schedule, the system shall sample at the reported schedule.
- (2) Systems shall collect samples within two days before or two days after the dates indicated in their sampling schedule (e.g., within a five day period around the schedule date) unless one of the conditions of paragraph (I)(2)(a) or (I)(2)(b) of this rule applies.
- (a) 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 shall sample as close to the scheduled date as is feasible unless the director accepts an alternative sampling date. The system shall submit an explanation for the delayed sampling date to the director concurrent with the shipment of the sample to the laboratory.
- (b) 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 paragraphs (H) to (J) of rule 3745-81-27 of the Administrative Code, or the failure of an approved laboratory to analyze the sample, then the system shall collect a replacement sample. The system shall collect the replacement sample not later than twenty-one 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 director accepts an alternative resampling date. The system shall submit an explanation for the delay sampling date to the director concurrent with the shipment of the sample to the laboratory.
- (3) Systems that fail to meet the criteria of paragraphs (I)(2)(a) and (I)(2)(b) of this rule for any source water sample required by paragraphs (A) to (H) of this rule shall revise their sampling schedules to add dates for collecting all missed samples. Systems shall submit the revised schedule to the director for acceptance prior to when the system begins collecting the missed samples.

(J) Sampling locations.

Systems required to conduct source water monitoring by paragraphs (A) to (H) of this rule shall collect samples for each plant that treats a surface water source. Where multiple plants draw water from the same influent, such as the same pipe or intake, the director may accept one set of monitoring results to be used to satisfy the requirements of paragraphs (A) to (H) of this rule for all plants.

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- (1) Systems shall collect source water samples prior to chemical treatment, such as coagulants, oxidants and disinfectants, unless the system meets the condition of paragraph (J)(2) of this rule.
- (2) The director may accept a system to collect a source water sample after chemical treatment. To grant this acceptance, the director shall 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.
- (3) Systems that recycle filter backwash water shall collect source water samples prior to the point of filter backwash water addition.
- (4) Bank filtration.
 - (a) Systems that receive Cryptosporidium treatment credit for bank filtration in accordance with paragraph (C) of rule 3745-81-73 of the Administrative Code, as applicable, shall collect source water samples in the surface water prior to bank filtration.
 - (b) Systems that do not receive Cryptosporidium treatment credit for bank filtration in accordance with paragraph (C) of rule 3745-81-73 of the Administrative Code and that use bank filtration as pretreatment to a filtration plant and do not intend to receive Cryptosporidium treatment credit for bank filtration under paragraph (F) of rule 3745-81-68 of the Administrative Code shall collect source water samples from the well (e.g., after bank filtration). Use of bank filtration during monitoring shall be consistent with routine operational practice.
- (5) Multiple sources.

Systems with plants that use multiple water sources, including multiple surface water sources and blended surface water and ground water sources, shall collect samples as specified in paragraph (J)(5)(a) or (J)(5)(b) of this rule. The use of multiple sources during monitoring shall be consistent with routine operational practice.

 - (a) If a sampling tap is available where the sources are combined prior to treatment, systems shall collect samples from the tap.
 - (b) If a sampling tap where the sources are combined prior to treatment is not available, systems shall collect samples at each source near the intake on the same day and shall follow either paragraph (5)(b)(i) or (5)(b)(ii) of this rule for sample analysis.

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(i) Systems may composite samples from each source into one sample prior to analysis. The volume of sample from each source shall be weighted according to the proportion of the source in the total plant flow at the time the sample is collected.

(ii) Systems may analyze samples from each source separately and calculate a weighted average of the analysis results for each sampling date. The weighted average shall be calculated by multiplying the analysis result for each source by the fraction the source contributed to total plant flow at the time the sample was collected and then summing these values.

(K) Additional requirements.

Systems shall submit a description of their sampling location(s) to the director at the same time as the sampling schedule required by paragraph (I) of this rule. This description shall address the position of the sampling location in relation to the system's water source(s) and treatment processes, including pretreatment, points of chemical treatment, and filter backwash recycle. If the director does not respond to a system regarding sampling location(s), the system shall sample at the reported location(s).