



**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
WATER DIVISION**

**NOTICE OF INTENDED ACTION**

**Agency Name:** Alabama Department of Environmental Management  
**Rule No. & Title:** 335-7-2-.07 Microbiological Standards and Monitoring Requirements (Amend)  
**Intended Action:** The Alabama Department of Environmental Management proposes to amend rule 335-7-2-.07

**Substance of Proposed Action:**


The Department proposes to make administrative corrections and clarifications in this rule.

**Time, Place, Manner of Presenting Views:**

Comments may be submitted in writing or orally at a public hearing to be held at 1:00 PM, May 13, 2016, in the ADEM Main Hearing Room, 1400 Coliseum Boulevard, Montgomery, Alabama 36110.

**Final Date for Comment and Completion of Notice:** May 13, 2016

**Contact Person at Agency:** Christy Monk, (334) 394-4364

  
\_\_\_\_\_  
**Lance R. LeFleur**  
**Director**

**335-7-2-.07 Microbiological Standards and Monitoring Requirements.**

(1) Public water systems will be in compliance with the *E. coli* MCL unless any of the conditions identified below exist:

(a) The system has an *E. coli* positive repeat sample following a total coliform positive routine sample.

(b) The system has ~~an~~ a total coliform positive repeat sample following a *E. coli* positive routine sample.

(c) The system fails to take all required repeat samples following an *E. coli* positive routine sample.

(d) The system fails to test for *E. coli* when any repeat sample tests positive for total coliform.

(2) Water systems are required to monitor for microbiological contaminants at sites which are representative of water throughout a distribution system during any month of operation according to a written sample plan acceptable to the Department. All routine and repeat compliance samples showing total coliform positive must be analyzed for *E. coli* bacteria. If *E. coli* is present, the system must notify the Department no later than the end of the day the results are provided to the system, unless the system is notified of the result after the working hours of the Department and the Department does not have either an after-hours phone line or an alternative notification procedure, in which case the system must notify the Department before the end of the next business day. Failure to notify the Department following an *E. coli*-positive sample in a timely manner is a reporting violation of ~~rule-subparagraph~~ 335-7-10-.06(13)(b). The residual disinfectant concentration must be measured at least at the same points in the distribution system and at the same time as total coliforms are sampled. The Department may allow a public water system which uses both a surface water source or a ground water source under direct influence of surface water, and a ground water source, to take disinfectant residual samples at points other than the total coliform sampling points if the Department determines that such points are more representative of treated (disinfected) water quality within the distribution system. Systems must provide the results of monthly bacteriological monitoring to the Department reflecting the following minimum number of samples per month. Samples invalidated by the Department cannot be used to demonstrate compliance with this rule. Water systems must have analyzed a minimum number of monthly routine distribution compliance samples based on the population shown in the following chart:

Population Served	Compliance Samples
25 - 2,500	2
2,501 - 3,300	3
3,301 - 4,100	4
4,101 - 4,900	5
4,901 - 5,800	6
5,801 - 6,700	7
6,701 - 7,600	8
7,601 - 8,500	9
8,501 - 12,900	10
12,901 - 17,200	15
17,201 - 21,500	20
21,501 - 25,000	25
25,001 - 33,000	30
33,001 - 41,000	40
41,001 - 50,000	50
50,001 - 59,000	60
59,001 - 70,000	70
70,001 - 83,000	80
83,001 - 96,000	90
96,001 - 130,000	100
130,001 - 220,000	120
220,001 - 320,000	150
320,001 - 450,000	180
450,001 - 600,000	210
600,001 - 780,000	240
780,001 - 970,000	270
970,001 - 1,230,000	300
1,230,001 - 1,520,000	330
1,520,001 - 1,850,000	360
1,850,001 - 2,270,000	390
2,270,001 - 3,020,000	420
3,020,001 - 3,960,000	450
3,960,001 or more	480

(3) Public water systems shall collect bacteriological compliance samples at regular time intervals throughout the month. Systems required to collect five or fewer distribution compliance samples in one month may collect all required samples on a single day if they are taken from different sites. Systems required to collect more than five distribution compliance samples in one month shall not collect all of their samples on the same day. A system may conduct more compliance monitoring than is required by this subpart to investigate potential problems in the distribution system and use monitoring as a tool to assist in uncovering problems. A system may take more than the minimum number of required routine and repeat samples and must include the results in calculating whether the coliform treatment technique trigger has been exceeded only if the samples are taken in accordance with the existing sample siting plan and are representative of water throughout the distribution system.

(4) Special samples may be required to provide information regarding the quality of raw water from existing and proposed sources and to determine

whether disinfection practices following water main installation or repair is sufficient. Raw or plant water samples shall be taken at a frequency established by the Department. Neither raw samples nor special samples will be used to determine compliance with the microbiological drinking water standards. Repeat samples are not considered special purpose samples, and must be used to determine whether the coliform treatment technique trigger has been exceeded.

(5) Repeat samples shall be collected according to the following requirements:

(a) If a routine compliance sample is total coliform positive the public water system must collect a set of repeat samples within 24 hours of being notified of the positive results unless a time extension is obtained from the Department. No fewer than three repeat samples must be obtained for each total coliform positive sample found.

(b) Community water systems must collect at least one repeat sample from the sampling tap where the original total coliform positive sample was taken and at least one repeat sample at a tap within five service connections upstream and at least one repeat sample at a tap within five service connections downstream of the original sampling site. The Department may waive the requirement to collect the downstream sample should the original sample be collected at the end of a distribution line. If the downstream sample is waived, one additional sample must be taken upstream at a location within five service connections upstream of the original sampling site.

(c) Non-community and NTNC water systems must collect at least one repeat sample from the sampling tap where the original total coliform positive sample was taken and at least one repeat sample at a tap within five service connections upstream and at least one repeat sample at a tap within five service connections downstream of the original sampling site. The Department may allow alternative sample locations in lieu of the requirement to collect at least one repeat sample upstream or downstream of the original sample site. The alternative sample locations must be included in the site sampling plan required by paragraph 335-7-2-.07(6) of this rule. ~~water systems must collect at least one repeat sample from the sampling tap where the original total coliform positive sample was taken and the other two repeat samples at representative taps from opposite sides of the facility served by the system.~~

(d) The system must collect all repeat samples on the same day except a system with a single service connection may be allowed by the Department to collect the required set of repeat samples over a three-day period.

(e) If one or more repeat samples in a set is total coliform positive, the public water system must collect an additional set of repeat samples for each positive sample required above. The additional samples must be collected within 24 hours of being notified of the positive result. The system must repeat this process until either total coliforms are not detected in one complete set of repeat samples or the system exceeds the treatment technique trigger for total coliforms and notifies the Department.

(f) Systems may propose repeat monitoring locations to the Department that the system believes to be representative of a pathway for contamination of the distribution system. A system may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard operating procedure (SOP) in its sample siting plan. The system must design its SOP to focus the repeat samples at locations that best verify and determine the extent of potential contamination of the distribution system area based on specific situations. The Department may modify the SOP or require alternative monitoring locations as needed.

(g) Ground water systems serving 1,000 or fewer people may propose repeat sampling locations to the Department that differentiate potential source water and distribution system contamination. A ground water system with a single well required to conduct triggered source water monitoring may, with written Department approval, take one of its repeat samples at the monitoring location required for triggered source water monitoring if the system demonstrates to the Department's satisfaction that the sample siting plan remains representative of water quality in the distribution system. If approved by the Department, the system may use that sample result to meet the monitoring requirements for both the groundwater rule and this section ~~rule~~.

1. If a repeat sample taken at the monitoring location required for triggered source water monitoring is *E. coli*-positive, the system has violated the *E. coli* MCL. If a system takes more than one repeat sample at the monitoring location required for triggered source water monitoring, the system may reduce the number of additional source water samples by the number of repeat samples taken at that location that were not *E. coli*-positive.

2. If a system takes more than one repeat sample at the monitoring location required for triggered source water monitoring, and more than one repeat sample is *E. coli*-positive, the system has violated the *E. coli* MCL.

3. If all repeat samples taken at the monitoring location required for triggered source water monitoring are *E. coli*-negative and a repeat sample taken at a monitoring location other than the one required for triggered source water monitoring is *E. coli*-positive, the system has violated the *E. coli* MCL.

4. The system must demonstrate that the alternate repeat sampling sites identified in their sample site plan remains representative of the water quality in the distribution system. The Department may determine that monitoring at the entry point to the distribution system (especially for undisinfected ground water systems) is effective to differentiate between potential source water and distribution system problems.

~~(h) Failure to provide results from the minimum number of monthly compliance samples, repeated failure to provide results from required raw water samples and failure to analyze for *E. coli* following a total coliform positive routine sample is a monitoring violation requiring public notification. Failure to take every required monthly routine sample, repeated failure to provide results from required raw water samples and failure to analyze for *E. coli* following a total~~

coliform-positive routine sample is a monitoring violation requiring public notification. Failure to submit bacteriological monitoring results after a system properly conducts monitoring in a timely manner is a reporting violation.

(6) Systems must develop a written sample siting plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system. These plans are subject to Department review and revision. Systems must collect total coliform samples according to the written sample siting plan. Routine and repeat sample sites and any sampling points necessary to meet the requirements of the groundwater rule must be included in the sampling plan.

(7) All seasonal systems must demonstrate completion of a Department-approved start-up procedure, which may include a requirement for start-up sampling prior to serving water to the public. Seasonal system may be exempt from some or all of the requirements for seasonal systems if the entire distribution system remains pressurized during the entire period that the system is not operating. A treatment technique violation will occur when a seasonal system fails to complete a Department-approved start-up procedure prior to serving water to the public. Failure to submit certification of completion of Department-approved start-up procedure by a seasonal system is a reporting violation.

**Author:** Joe Alan Power, Thomas S. DeLoach, Edgar K. Hughes, Dennis D. Harrison.

**Statutory Authority:** Code of Alabama 1975, §§ 22-23-33, 22-23-49, 22-22A-5, 22-22A-6.

**History:** May 23, 1977; Repealed and readopted: January 4, 1989; October 31, 1990; effective December 5, 1990.

**Amended:** December 12, 2005; January 22, 2008; November 25, 2014; XXXX XX, 2016.