

62-550.518 Microbiological Monitoring Requirements.

The provisions of subsections 62-550.518(1) through (6), F.A.C., pertaining to distribution system sampling or samples and the provisions of subsection 62-550.518(12), F.A.C., are applicable until March 31, 2016. The provisions of subsections 62-550.518(7) through (11), F.A.C., pertaining to distribution system sampling or samples are applicable until all required repeat monitoring under subsections 62-550.518(7) and (8), F.A.C., and fecal coliform or *E. coli* testing under subsection 62-550.518(10), F.A.C., that was initiated by a total coliform-positive sample taken before April 1, 2016, is completed, as well as analytical method, reporting, recordkeeping public notification, and consumer confidence report requirements associated with that monitoring and testing. Beginning April 1, 2016, the provisions of 40 C.F.R. Part 141, Subpart Y, which is incorporated by reference in Rule 62-550.830, F.A.C., are applicable, with systems required to begin regular monitoring at the same frequency as the system-specific frequency required on March 31, 2016. (40 C.F.R. §141.21(h) revised as of July 1, 2014.) This introductory text shall be effective on July 7, 2015.

(1) All public water systems shall analyze for coliform bacteria to determine compliance with subsection 62-550.310(5), F.A.C. Public water systems shall collect total coliform samples at sites that are representative of water throughout the distribution system and in accordance with a written sampling plan that addresses location, timing, frequency and rotation period. These plans shall be available for review and possible revision on the occasion of a sanitary survey conducted by the Department. Descriptions of sampling locations shall be specific, i.e., numbered street addresses or lot numbers. Pressure tank or plant tap samples are not acceptable for determining compliance.

(2) Total coliform samples shall be taken at regular intervals and in numbers proportionate to the population served by the system. Community water systems, non-transient non-community water systems, transient non-community water systems that are subpart H systems and transient non-community water systems that serve more than 1,000 persons per day during any one month shall take monthly distribution system samples. In addition, systems that are using ground water not under the direct influence of surface water shall take a minimum of one monthly raw water sample that is representative of each ground water source (i.e., well) not under the direct influence of surface water. For purposes of this subsection, consecutive systems that receive any finished water originating from a subpart H system are considered subpart H systems. In no event shall the number of distribution system samples be less than as set forth below:

Population Served	Minimum number of routine samples		
			per month
25	to	2,500	2
2,501	to	3,300	3
3,301	to	4,100	4
4,101	to	4,900	5
4,901	to	5,800	6
5,801	to	6,700	7
6,701	to	7,600	8
7,601	to	8,500	9
8,501	to	12,900	10
12,901	to	17,200	15
17,201	to	21,500	20
21,501	to	25,000	25
25,001	to	33,000	30
33,001	to	41,000	40
41,001	to	50,000	50
50,001	to	59,000	60
59,001	to	70,000	70
70,001	to	83,000	80
83,001	to	96,000	90
96,001	to	130,000	100

130,001	to	220,000	120
220,001	to	320,000	150
320,001	to	450,000	180
450,001	to	600,000	210
600,001	to	780,000	240
780,001	to	970,000	270
970,001	to	1,230,000	300
1,230,001	to	1,520,000	330
1,520,001	to	1,850,000	360
1,850,001	to	2,270,000	390
2,270,001	to	3,020,000	420
3,020,001	to	3,960,000	450
3,960,001	or	more	480

(3) Transient non-community water systems using only ground water not under the direct influence of surface water and serving 1,000 or fewer persons shall monitor at the rate of two distribution system samples in each calendar quarter during which the system provides water to the public. In addition, such systems shall take a minimum of one quarterly raw water sample that is representative of each ground water source (i.e., well).

(4) Public water systems shall collect distribution system samples at regular intervals throughout the month, except that a system that uses only ground water not under the direct influence of surface water and that serves 4,900 persons or fewer may collect all required samples on a single day if the samples are taken from different sites.

(5) Subpart H systems in an interim period per subparagraph 62-550.817(2)(a)2., F.A.C., until filtration is installed in compliance with 40 CFR 141, Subpart H, adopted by Rule 62-550.817, F.A.C., shall collect at least one total coliform sample near the first service connection each day the turbidity level of the source water exceeds one NTU, measured as specified in 40 CFR 141.74(b)(2), adopted by Rule 62-550.817, F.A.C. This sample shall be analyzed for the presence of total coliforms. When any turbidity measurement in any day exceeds one NTU, the system shall collect this coliform sample within 24 hours unless the Department determines that the system, for logistical reasons outside the system's control, cannot have the sample analyzed within 30 hours of collection. In this case, the Department shall specify how much time the system has to collect the sample. Sample results from this coliform monitoring shall be included in determining compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C.

(6) Special purpose samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, shall not be used to determine compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C. Repeat distribution system samples taken pursuant to subsection (7) of this section are not considered special purpose samples and shall be used to determine compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C.

(7) Additional or Repeat Monitoring.

(a) If a raw water sample is total-coliform-positive, the public water system shall disinfect and bacteriologically survey the relevant well(s) in accordance with subsection 62-555.315(6), F.A.C., when notified in writing by the Department to do so and shall conduct physical characteristics monitoring in accordance with subsection 62-550.517(2), F.A.C., when notified in writing by the Department to do so.

(b) If a routine distribution system sample is total-coliform-positive, the public water system shall collect a set of repeat distribution system samples within 24 hours of being notified of the positive result. The system shall collect all repeat samples on the same day. A system that collects monthly routine samples shall collect no fewer than three repeat samples for each total-coliform-positive sample found. A transient non-community water system that collects quarterly routine samples shall collect no fewer than four repeat samples for each total-coliform-positive sample found. The Department shall extend the 24-hour limit on a case-by-case basis if the system has a logistical problem that is beyond its control in collecting the repeat samples within 24 hours. If an extension is granted, the Department shall specify how much time the system has to collect the repeat samples. If a routine distribution system sample is total-coliform-positive and the public water system is collecting fewer than five routine distribution system samples per month, the system also shall comply with the sampling requirements in subsection 62-550.518(8), F.A.C.

(c) The system shall collect at least one repeat distribution system sample from the sampling tap where the original total-coliform-positive sample was taken, at least one repeat distribution system sample at a tap within five service connections upstream of the original sampling site, and at least one repeat distribution system sample at a tap within five service connections downstream of the original sampling site. If a total-coliform-positive sample is at the beginning or end of the distribution system, or one service connection away from the beginning or end of the distribution system, the system need not collect a repeat sample upstream or downstream of the original sampling site, whichever is applicable, but still must collect the total number of repeat samples specified in paragraph (b) above.

(d) If any repeat distribution system sample in the set is total-coliform-positive the public water system shall collect an additional set of repeat distribution system samples in the manner specified in paragraphs (7)(b) and (c) of this section. The public water system shall collect the additional samples within 24 hours of being notified of the positive result unless the Department extends the limit as provided in paragraph (7)(b) of this section. The system shall repeat this process until either total coliforms are not detected in one complete set of repeat samples or the system determines that the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C., has been exceeded and notifies the Department in accordance with subsections (10) and (11) below.

(e) Results of all routine and repeat distribution system samples not invalidated by the Department shall be included in determining compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C.

(8) If a system collecting fewer than five routine distribution system samples per month has one or more total-coliform-positive samples and the Department does not invalidate the sample(s) under paragraph 62-550.518(9)(a), F.A.C., it shall collect at least five routine distribution system samples during the next month the system provides water to the public.

(9) Invalidation of Total Coliform Samples. A total-coliform-positive sample invalidated under this subsection does not count toward meeting the minimum monitoring requirements of this section. Department invalidation of a total coliform-positive sample invalidates subsequent fecal-coliform-positive or *E.-coli*-positive results on the same sample.

(a) The Department shall invalidate a total-coliform-positive sample only if any of the following conditions are met:

1. The laboratory establishes that improper sample analysis caused the total-coliform-positive result.
2. The Department, on the basis of the results of the repeat distribution system samples collected as required by subsection (7) of this section, determines that the total-coliform-positive sample resulted from a non-distribution system plumbing problem. The Department shall not invalidate a sample on the basis of repeat samples unless all repeat samples collected at the same tap as the original total-coliform-positive sample are also total-coliform-positive and all repeat samples collected within five service connections of the original tap are total-coliform-negative. The Department shall not invalidate a total-coliform-positive sample on the basis of repeat samples if all the repeat samples are total-coliform-negative or if the public water system has only one service connection.

3. The Department has received in writing substantial grounds to conclude that a total-coliform-positive result is due to a circumstance or condition that does not reflect raw water quality or water quality in the distribution system. In this case, the system shall still collect all repeat distribution system samples required under subsection (7) of this section and use them to determine compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C. The written documentation shall describe the specific cause of the total-coliform-positive sample and what action the system has taken, or will take, to correct this problem. The Department shall not invalidate a total-coliform-positive sample solely on the grounds that all repeat samples are total-coliform-negative.

(b) Unless total coliforms are detected, a laboratory shall invalidate a total coliform sample if the sample produces a turbid culture in the absence of gas production using an analytical method where gas formation is examined (e.g., the Multiple-Tube Fermentation Technique); produces a turbid culture in the absence of an acid reaction in the Presence-Absence (P-A) Coliform Test; or, exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter (e.g., Membrane Filter Technique). If a laboratory invalidates a sample because of such interference, the system shall report to the Department in accordance with subsection 62-550.730(1), F.A.C., and collect another sample from the same location as the original sample within 24 hours of being notified of the interference problem. The system shall continue to resample every 24 hours and have the samples analyzed until it obtains a valid result. The Department shall expand the 24-hour requirement on a case-by-case basis if the system has a logistical problem that is beyond its control in collecting the repeat samples within 24 hours. If an extension is granted, the Department shall specify how much time the system has to collect the repeat samples.

(10) Fecal Coliforms/*Escherichia coli* (*E. coli*) Testing. If any raw water sample is total-coliform-positive, the system shall

analyze that total-coliform-positive culture to determine if *E. coli* is present. If any routine or repeat distribution system sample is total-coliform-positive, the system shall analyze that total-coliform-positive culture to determine if fecal coliforms are present or shall analyze that total-coliform-positive culture to determine if *E. coli* is present. If fecal coliform or *E. coli* is present in any repeat distribution system sample, the system shall notify the Department in accordance with paragraph (11)(a) below. If fecal coliform or *E. coli* is present in any routine distribution system sample or if *E. coli* is present in any raw water sample that is representative of a well previously considered to be meeting the bacteriological requirements in paragraph 62-555.315(6), F.A.C., the system shall notify the appropriate Department of Environmental Protection (DEP) District Office or appropriate Approved County Health Department (ACHD) by the end of the day that the system learns of the test result unless the system learns of the result after the appropriate DEP District Office or appropriate ACHD is closed, in which case the system shall notify the appropriate DEP District Office or appropriate ACHD before the end of the next business day.

(11) Response to Violation.

(a) A public water system that has an acute violation of the total coliform maximum contaminant level (MCL) as specified in paragraph 62-550.310(5)(b), F.A.C., shall report the violation to the Department as soon as practicable but no later than 24 hours after the system learns of the violation and shall notify the public in accordance with Rule 62-560.410, F.A.C. A public water system that has a non-acute violation of the total coliform MCL as specified in paragraph 62-550.310(5)(a), F.A.C., shall report the violation to the Department no later than the end of the next business day after it learns of the violation, and shall notify the public in accordance with Rule 62-560.410, F.A.C.

(b) A public water system that has failed to comply with a coliform monitoring requirement shall report the monitoring violation to the Department within 48 hours after the system discovers the violation, and shall notify the public in accordance with Rule 62-560.410, F.A.C.

(12) The requirements contained in 40 C.F.R. §141.21(d) revised as of July 1, 2014 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05580>), are adopted and incorporated herein by reference. This subsection shall be effective on July 7, 2015.

Rulemaking Authority 403.8055, 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.518, Amended 9-7-94, 2-7-95, 8-1-00, 11-27-01, 4-3-03, 11-28-04, 7-7-15.