ADEQ
Arizona Department of Environmental Quality

State Application Revision for Safe Drinking Water Act Primacy Authority: Revised Total Coliform Rule

Water Quality Division
December 6, 2021 Final

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1 Primacy Update Checklist per 40 CFR 142.12(c)(1): Revised Total Coliform Rule

Required Program Elements		Revision to State Program (YES/NO)	EPA Findings/Comments
40 CFR 142.10	Primary Enforcement Definition of Public Water System.[1]	No. ARS 49-352 – Signed into law on April 22, 1997 (see HB2304). Amended in 2000 (see SB1435). Amended in 2003 (See HB2381). A.A.C. R18-4-103 – Amended in final rulemaking, effective 4/2/16 (see 22 A.A.R. 379). ADEQ submitted a separate primacy package to EPA for PWS definition on July 26, 2019. EPA approved the submittal effective January 21, 2020 (84 FR 70182).	
40 CFR 142.10(a)	Regulations No Less Stringent	Yes R18-4-126 ADEQ amended rule effective April 2, 2016 (see 22 A.A.R 379)	
40 CFR 142.10(b)(1)	Maintain Inventory	Yes R18-4-106 R18-5-101 R18-5-102 R18-5-104 R18-5-113 R18-5-507 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978).	

[1] New requirement from the 1996 Amendments. Regulations published in the April 28, 1998 Federal Register.

40 CFR 142.10(b)(2)	Sanitary Survey Program	Yes R18-4-208 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). Yes A.R.S. 41-1009 Signed into law in 1998. Most recent amendments in 2016 (see HB2337, Arizona 52nd Legislature, Second Regular Session, Chapter 362, Section 1)	
40 CFR 142.10(b)(3)	Laboratory Certification Program	Yes R18-4-105 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). ADEQ amended again effective April 2, 2016 (see 22 A.A.R. 379).	
40 CFR 142.10(b)(4)	Laboratory Capability	Yes R18-4-105 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). ADEQ amended again effective April 2, 2016 (see 22 A.A.R. 379).	
40 CFR 142.10(b)(5)	Plan Review Program	Yes R18-4-603 Title 18, Chapter 5, Article 5 ADEQ recodified Chapter 5 on January 30, 2004 (see 10 A.A.R. 585).	
40 CFR 142.10(b)(6)(i)	Authority to apply regulations	Yes R18-4-103 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). ADEQ amended again effective April 2, 2016 (see 22 A.A.R. 379).	

40 CFR 142.10(b)(6)(ii)	Authority to sue in courts of competent jurisdiction	No A.R.S. 49-262 No. A.R.S. 49-354 – ADEQ submitted additional AG certification and rationale for administrative penalty authority to EPA on July 26, 2019. EPA approved the submittal effective January 21, 2020 (84 FR 70182).	
40 CFR 142.10(b)(6)(iii)	Right of Entry	No A.R.S. 49-203(B) A.R.S. 49-353 Yes – A.A.C. R18-4-207 (ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978)).	
40 CFR 142.10(b)(6)(iv)	Authority to require records	Yes R18-4-106 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978).	
40 CFR 142.10(b)(6)(v)	Authority to require public notification	No R18-4-119 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). ADEQ submitted a primacy package revision for Public Notice to EPA on July 26, 2019. EPA approved the submittal effective January 21, 2020 (84 FR 70182).	
40 CFR 142.10(b)(6)(vi)	Authority to assess civil and criminal penalties	No A.R.S. 49-262, 263 No. A.R.S. 49-354 – ADEQ submitted additional AG certification and rationale for administrative penalty authority to EPA on July 26, 2019. EPA approved the submittal effective January 21, 2020 (84 FR 70182).	

40 CFR 142.10(b)(6)(vii)	Authority to require CWSs to provide CCRs.[2]	No. R18-4-117. ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). ADEQ submitted a primacy package revision for CCR to EPA on July 26, 2019. EPA approved the submittal effective January 21, 2020 (84 FR 70182).	
40 CFR 142.10(c)	Maintenance of Records	Yes R18-4-106 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978).	
40 CFR 142.10(d)	Variance/Exemption Conditions (if applicable).[3]	Yes R18-4-113 R18-4-103(C-D) ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). ADEQ submitted a draft primacy package revisions for variances and exemptions for EPA's review per 40 CFR 142.12(d)(1) on 6/10/2020.	
40 CFR 142.10(e)	Emergency Plans	Yes R18-4-204 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978).	
40 CFR 142.10(f)	Administrative Penalty Authority	No. A.R.S. 49-354. ADEQ submitted additional AG certification and rationale for administrative penalty authority to EPA on July 26, 2019. EPA approved the submittal effective January 21, 2020 (84 FR 70182).	

[2] New regulation published in the August 19, 1998 Federal Register.
[3] New regulations published in the August 14, 1998 Federal Register.

40 CFR 142.10(g)	Electronic Reporting Regulations	Yes R18-4-106 ADEQ amended rules effective August 30, 2008 (see 14 A.A.R. 2978). EPA has approved Arizona's electronic reporting (see 79 FR 52318; 81 FR 36538).	

2 Introduction

The U.S. Congress passed the Safe Drinking Water Act in 1974, with later amendments in 1986 and 1996. The Act (SDWA) requires the U.S. Environmental Protection Agency (EPA) to establish and enforce standards. These standards are further set forth in the Code of Federal Regulations for water contaminants EPA identifies as threats to public health and the environment (see 40 CFR 141, 142, 143). Public water systems must comply with EPA's standards, including maximum contaminant levels or treatment techniques, and monitoring and reporting requirements.

EPA delegates primary enforcement authority of the SDWA to states and Indian Tribes if they meet certain the requirements. This delegation is commonly referred to as "primacy." The 1996 SDWA Amendments updated the process for states to obtain and/or retain primacy. On April 28, 1998, EPA promulgated the Primacy Rule to reflect those statutory changes.[4]

In order to obtain primacy, a state or Indian Tribe must submit an application to EPA under 40 CFR 142, Subpart B. These applications are due no later than two years after EPA promulgates or revises a drinking water regulation.

2.1 Statement of Introduction and Purpose

The State of Arizona (Arizona Department of Environmental Quality or ADEQ) received initial primary enforcement approval from EPA in 1978.[5] EPA then approved a subsequent primacy program revision for eight VOC and public notice rule requirements in 1991.[6] Later in 1993, EPA approved a primacy program revision for filtration and disinfection of surface water systems, ground water systems influenced by surface water, and total coliform bacteria.[7] The 1996 SDWA Amendments triggered new primacy package requirements, as they amended the federal definition of a "public water system" and added provisions for administrative penalty authority.

Since then, EPA and ADEQ have identified additional Arizona state primacy program revisions for several contaminant-specific federal rules, as well as updating the State's primacy program

[4] See 63 FR 23362
[5] See letter from Frank Covington, Water Division Director, EPA to Ted Williams, AZ Department of Health Services Deputy Director, dated August 25, 1978. See also final Federal Register notice, 43 FR 38083, August 25, 1978.
[6] See 56 FR 9698 (March 7, 1991) and letter from Daniel McGovern, Regional Administrator of EPA Region 9 to Randolph Wood, Director of AZ Department of Environmental Quality dated April 26, 1991.
[7] See 58 FR 36960 (July 9, 1993 and letter from John C Wise, Acting Regional Administrator of EPA Region 9 to Edward Z Fox, Director of AZ Department of Environmental Quality dated August 12, 1993.

to reflect the SDWA Amendments for public water system definition and Arizona's audit privilege laws.[8] ADEQ submitted primacy revisions to EPA on July 26, 2019 for the following: public water system definition, Public Notice rule, Consumer Confidence Reporting rule, as well as AZ Attorney General Certifications and rationale for the State's administrative penalty authority and environmental audit privilege laws. EPA approved these submittals on January 21, 2020.[9] ADEQ also submitted the primacy revisions for the Control of Lead and Copper to EPA for final review and approval on June 11, 2020, and the Stage 1 and Stage 2 Disinfectants/Disinfection Byproduct Rules on December 21, 2020. EPA approved the submittal for Control of Lead and Copper on April 12, 2021[10]. Therefore, ADEQ is submitting revisions to its approved State primacy program under 40 CFR 142.12. This submittal constitutes the revision for the Revised Total Coliform Rule, which was promulgated by EPA on April 1, 2016.[11] ADEQ is submitting this revision to become the primary enforcement authority for the State's public water systems for the Revised Total Coliform Rule.

2.2 Application Revision Components and Process

The required contents of a state's request for approval of a program revision are set forth in 40 CFR 142 Subpart B. Within that regulatory framework, EPA has issued guidance for various revisions to the program. EPA guidance[12] states that a final primacy revision application is complete when it contains the following items:

- State Primacy Revision Checklist per 40 CFR 142.12(c)(1) - (see page 1 of this document)
- Text of State's Regulations - (See Appendix A of this document)
- Text of State's Regulations - (See Appendix B of this document)
- Primacy Revision Crosswalk - (See Chapter 3 of this document)
- State Reporting and Recordkeeping Checklist - (See Chapter 3 of this document)
    - EPA guidance further stipulates a state can use the primacy revision crosswalk to meet this requirement
- Special Primacy Requirements - (See Chapter 3 of this document)

[8] See Arizona Revised Statutes §§ 49-1401 through 49-1408.
[9] See 84 FR 70182 (December 20, 2019).
[10] See 86 FR 14109 (March 12, 2021)
[11] See 78 FR 10270
[12] *The Revised Total Coliform (RTCR) State Implementation Guidance – Interim Final,* U.S. Environmental Protection Agency, Office of Water, December 2014. See also *Revised State Implementation Guidance for the Public Notice (PN) Rule*, U.S. Environmental Protection Agency, Office of Water, March 2010. See also *Revised State Implementation Guidance for the Consumer Confidence Report (CCR) Rule*, U.S. Environmental Protection Agency, Office of Water, April 2010.

  - EPA guidance further stipulates a state can use the primacy revision crosswalk to meet this requirement

- Attorney's General Statement of Enforceability - (See Letter from AZ Attorney General's Office in this document)

Federal regulations also allow states to submit draft applications to EPA for preliminary review and EPA can make tentative determinations on the draft applications.[13] ADEQ submitted a draft version of this application revision to EPA on April 3, 2019. EPA's feedback consisted of identification of a number of deficiencies in the application that needed to be addressed by ADEQ in the final application, including missing or errant citations and requested elaboration in the crosswalk.

ADEQ is submitting this final application revision for EPA's approval.[14] EPA reviews the application for adequate state authority to implement the Safe Drinking Water Act. EPA's review also identifies any differences in the state's regulatory language and to ensure those differences do not make the state's rules less stringent than federal rules. If a state's requirements and authorities differ than the federal version, the state's application must include information and documentation that demonstrates the state's program is at least as stringent as the federal requirements.

EPA must take action on this revision no later than 90 days after EPA determines that the submittal is complete and final. EPA must notify ADEQ of its action.[15] If no timely request for hearing is received and the Administrator does not determine to hold a hearing on his own motion, the Administrator's determination shall become effective 30 days after notice is issue[16].

The next chapter includes a side-by-side comparison of EPA's federal drinking water regulation and Arizona's state statutes and rules. ADEQ analyzed both versions of regulations to determine that the State's program is no less stringent than the federal program. The State of Arizona can effectively enforce the federal Revised Total Coliform Rule.

[13] See 40 CFR 142.12(d)(1)
[14] Under 40 CFR 142.12(d)(2)
[15] See 40 CFR 142.12(d)(3)
[16] See 40 CFR 142.13(g)

3 Primacy Revision Crosswalk: Revised Total Coliform Rule

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION	DIFFERENT FROM FED. REQUIREMENT?
Part 141 National Primary Drinking Water Regulations			
SUBPART A – GENERAL			
40 CFR 141.2 DEFINITIONS.			
Clean compliance history is, for the purposes of subpart Y, a record of no MCL violations under § 141.63; no monitoring violations under § 141.21 or subpart Y; and no coliform treatment technique trigger exceedances or treatment technique violations under subpart Y.	40 CFR 141.2	R18-4-103(A)	Federal rule text incorporated by reference in R18-4-103.
Level 1 assessment is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.	40 CFR 141.2	R18-4-103(A)	Federal rule text incorporated by reference in R18-4-103.
Level 2 assessment is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive	40 CFR 141.2	R18-4-103(A)	Federal rule text incorporated by reference in R18-4-103.

investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the State, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the State in the case of an *E. coli* MCL violation.			
Sanitary defect is a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.	40 CFR 141.2	R18-4-103(A)	Federal rule text incorporated by reference in R18-4-103.
Seasonal system is a non-community water system that is not operated as a public water system on a year- round basis and starts up and shuts down at the beginning and end of each operating season.	40 CFR 141.2	R18-4-103(A)	Federal rule text incorporated by reference in R18-4-103.
40 CFR 141.4 VARIANCES AND EXEMPTIONS.			
Variances or exemptions from certain provisions of these regulations may be granted pursuant to sections 1415 and 1416 of the Act and subpart K of part 142 of this chapter (for small system variances) by the entity with primary enforcement responsibility, except that variances or exemptions from the MCLs for total coliforms and *E. coli* and variances from any of the treatment technique requirements of subpart H of this part may not be granted.	40 CFR 141.4(a)	R18-4-103(A)	Federal rule text incorporated by reference in R18-4-103,
EPA has stayed the effective date of this section relating to the total coliform MCL of § 141.63(a) for systems that demonstrate to the State that the violation of the total coliform MCL is due to a persistent growth of total coliforms in the distribution system rather than fecal or pathogenic	40 CFR 141.4(b)	R18-4-103(A)	Federal rule text incorporated by reference in R18-4-103.

contamination, a treatment lapse or deficiency, or a problem in the operation or maintenance of the distribution system. This is stayed until March 31, 2016, at which time the total coliform MCL is no longer effective. Note to paragraph (a): As provided in § 142.304(a), small system variances are not available for rules addressing microbial contaminants, which would include subparts H, P, S, T, W, and Y of this part.			
SUBPART C – MONITORING AND ANALYTICAL REQUIREMENTS			
40 CFR 141.21 COLIFORM SAMPLING.			
The provisions of paragraphs (a) and (d) of this section are applicable until March 31, 2016. The provisions of paragraphs (b), (c), (e), (f), and (g) of this section are applicable until all required repeat monitoring under paragraph (b) of this section and fecal coliform or *E. coli* testing under paragraph (e) of this section 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 subpart Y of this part are applicable, with systems required to begin regular monitoring at the same frequency as the system-specific frequency required on March 31, 2016.	40 CFR 141.21(h)	R18-4-105(A)	Federal rule text incorporated by reference in R18-4-105.
SUBPART F –MAXIMUM CONTAMINANT LEVEL GOALS AND MAXIMUM RESIDUAL DISINFECTANT LEVEL GOALS			
40 CFR 141.52 MAXIMUM CONTAMINANT LEVEL GOALS FOR MICROBIOLOGICAL CONTAMINANTS.			
MCLGs for the following contaminants are as indicated: Contaminant MCLG (1) *Giardia lamblia* ..... zero (2) Viruses ..... zero (3) *Legionella* ..... zero (4) Total coliforms (including fecal coliforms and *Escherichia coli*) ..... zero (5) *Cryptosporidium* ..... zero (6) *Escherichia coli (E. coli)* ..... zero	40 CFR 141.52(a)(1)-(6)	R18-4-108	Federal rule text incorporated by reference in R18-4-108.
The MCLG identified in paragraph (a)(4) of this section is applicable until March 31, 2016. The MCLG identified in paragraph (a)(6) of this section is applicable beginning April 1, 2016.	40 CFR 141.52(b)	R18-4-108	Federal rule text incorporated by reference in R18-4-108.

SUBPART G – NATIONAL PRIMARY DRINKING WATER REGULATIONS: MAXIMUM CONTAMINANT LEVELS AND MAXIMUM RESIDUAL DISINFECTANT LEVELS			
40 CFR 141.63 MAXIMUM CONTAMINANT LEVELS (MCLS) FOR MICROBIOLOGICAL CONTAMINANTS.			
Until March 31, 2016, the total coliform MCL is based on the presence or absence of total coliforms in a sample, rather than coliform density.	40 CFR 141.63(a)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
For a system that collects at least 40 samples per month, if no more than 5.0 percent of the samples collected during a month are total coliform-positive, the system is in compliance with the MCL for total coliforms.	40 CFR 141.63(a)(1)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
For a system that collects fewer than 40 samples per month, if no more than one sample collected during a month is total coliform-positive, the system is in compliance with the MCL for total coliforms.	40 CFR 141.63(a)(2)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
Until March 31, 2016, any fecal coliform-positive repeat sample or *E. coli*-positive repeat sample, or any total coliform-positive repeat sample following a fecal coliform-positive or *E. coli*-positive routine sample, constitutes a violation of the MCL for total coliforms. For purposes of the public notification requirements in subpart Q of this part, this is a violation that may pose an acute risk to health.	40 CFR 141.63(b)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
Beginning April 1, 2016, a system is in compliance with the MCL for *E. coli* for samples taken under the provisions of subpart Y of this part unless any of the conditions identified in paragraphs (c)(1) through (c)(4) of this section occur. For purposes of the public notification requirements in subpart Q of this part, violation of the MCL may pose an acute risk to health.	40 CFR 141.63(c)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
The system has an *E. coli*-positive repeat sample following a total coliform-positive routine sample.	40 CFR 141.63(c)(1)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
The system has a total coliform-positive repeat sample following an *E. coli*-positive routine sample.	40 CFR 141.63(c)(2)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
The system fails to take all required repeat samples following an *E. coli*-positive routine sample.	40 CFR 141.63(c)(3)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
The system fails to test for *E. coli* when any repeat sample tests positive for total coliform.	40 CFR 141.63(c)(4)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.

Until March 31, 2016, a public water system must determine compliance with the MCL for total coliforms in paragraphs (a) and (b) of this section for each month in which it is required to monitor for total coliforms. Beginning April 1, 2016, a public water system must determine compliance with the MCL for *E. coli* in paragraph (c) of this section for each month in which it is required to monitor for total coliforms.	40 CFR 141.63(d)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant level for total coliforms in paragraphs (a) and (b) of this section and for achieving compliance with the maximum contaminant level for *E. coli* in paragraph (c) of this section:	40 CFR 141.63(e)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
Protection of wells from fecal contamination by appropriate placement and construction;	40 CFR 141.63(e)(1)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
Maintenance of a disinfectant residual throughout the distribution system;	40 CFR 141.63(e)(2)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
Proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, cross connection control, and continual maintenance of positive water pressure in all parts of the distribution system;	40 CFR 141.63(e)(3)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
Filtration and/or disinfection of surface water, as described in subparts H, P, T, and W of this part, or disinfection of ground water, as described in subpart S of this part, using strong oxidants such as chlorine, chlorine dioxide, or ozone; and	40 CFR 141.63(e)(4)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
For systems using ground water, compliance with the requirements of an EPA-approved State Wellhead Protection Program developed and implemented under section 1428 of the SDWA.	40 CFR 141.63(e)(5)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.
The Administrator, pursuant to section 1412 of the Act, hereby identifies the technology, treatment techniques, or other means available identified in paragraph (e) of this section as affordable technology, treatment techniques, or other means available to systems serving 10,000 or fewer people for achieving compliance with the maximum contaminant level for total	40 CFR 141.63(f)	R18-4-109	Federal rule text incorporated by reference in R18-4-109.

coliforms in paragraphs (a) and (b) of this section and for achieving compliance with the maximum contaminant level for *E. coli* in paragraph (c) of this section.			
SUBPART H – FILTRATION AND DISINFECTION			
40 CFR141.71 CRITERIA FOR AVOIDING FILTRATION.			
The public water system must comply with the maximum contaminant level (MCL) for total coliforms in § 141.63(a) and (b) and the MCL for *E. coli* in § 141.63(c) at least 11 months of the 12 previous months that the system served water to the public, on an ongoing basis, unless the State determines that failure to meet this requirement was not caused by a deficiency in treatment of the source water.	40 CFR 141.71(b)(5)	R18-4-110(A)	Federal rule text incorporated by reference in R18-4-110.
40 CFR 141.74 ANALYTICAL AND MONITORING REQUIREMENTS.			
Until March 31, 2016, 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, as specified in § 141.21. Beginning April 1, 2016, 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, as specified in §§ 141.854 through 141.858. The State 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 State determines that such points are more representative of treated (disinfected) water quality within the distribution system. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in paragraph (a)(1) of this section, may be measured in lieu of residual disinfectant concentration.	40 CFR 141.74(b)(6)(i)	R18-4-110(A)	Federal rule text incorporated by reference in R18-4-110.
Until March 31, 2016, 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, as specified in § 141.21. Beginning April 1, 2016, 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, as specified in §§ 141.854 through 141.858. The State may allow a public water system which uses both a surface water	40 CFR 141.74(c)(3)(i)	R18-4-110(A)	Federal rule text incorporated by reference in R18-4-110.

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 State determines that such points are more representative of treated (disinfected) water quality within the distribution system. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in paragraph (a)(1) of this section, may be measured in lieu of residual disinfectant concentration.			
SUBPART L – DISINFECTANT RESIDUALS, DISINFECTION BYPRODUCTS, AND DISINFECTION BYPRODUCT PRECURSORS			
40 CFR 141.132 MONITORING REQUIREMENTS.			
Routine monitoring. Until March 31, 2016, community and non-transient non-community water systems that use chlorine or chloramines must measure the residual disinfectant level in the distribution system at the same point in the distribution system and at the same time as total coliforms are sampled, as specified in § 141.21. Beginning April 1, 2016, community and non-transient non-community water systems that use chlorine or chloramines must measure the residual disinfectant level in the distribution system at the same point in the distribution system and at the same time as total coliforms are sampled, as specified in §§ 141.854 through 141.858. Subpart H systems of this part may use the results of residual disinfectant concentration sampling conducted under § 141.74(b)(6)(i) for unfiltered systems or § 141.74(c)(3)(i) for systems which filter, in lieu of taking separate samples.	40 CFR 141.132(c)(1)(i)	R18-4-114(A)	Federal rule text incorporated by reference in R18-4-114.
SUBPART O – CONSUMER CONFIDENCE REPORTS			
40 CFR 141.153 CONTENT OF THE REPORTS.			
A report that contains information regarding a Level 1 or Level 2 Assessment required under Subpart Y of this part must include the applicable definitions:	40 CFR 141.153(c)(4)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.	40 CFR 141.153(c)(4)(i)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.	40 CFR 141.153(c)(4)(ii)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.

For contaminants subject to an MCL, except turbidity, total coliform, fecal coliform and *E. coli,* the highest contaminant level used to determine compliance with an NPDWR and the range of detected levels, as follows:	40 CFR 141.153(d)(4)(iv)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
For total coliform analytical results until March 31, 2016:	40 CFR 141.153(d)(4)(vii)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
For fecal coliform and *E. coli* until March 31, 2016: The total number of positive samples;	40 CFR 141.153(d)(4)(viii)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
For *E. coli* analytical results under subpart Y: The total number of positive samples.	40 CFR 141.153(d)(4)(x)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
Systems required to comply with subpart Y.	40 CFR 141.153(h)(7)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
Any system required to comply with the Level 1 assessment requirement or a Level 2 assessment requirement that is not due to an *E. coli* MCL violation must include in the report the text found in paragraph (h)(7)(i)(A) and paragraphs (h)(7)(i)(B) and (C) of this section as appropriate, filling in the blanks accordingly and the text found in paragraphs (h)(7)(i)(D)(1) and (2) of this section if appropriate.	40 CFR 141.153(h)(7)(i)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.	40 CFR 141.153(h)(7)(i)(A)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
During the past year we were required to conduct [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s). [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s) were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.	40 CFR 141.153(h)(7)(i)(B)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.

During the past year [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were required to be completed for our water system. [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.	40 CFR 141.153(h)(7)(i)(C)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
Any system that has failed to complete all the required assessments or correct all identified sanitary defects, is in violation of the treatment technique requirement and must also include one or both of the following statements, as appropriate:	40 CFR 141.153(h)(7)(i)(D)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
During the past year we failed to conduct all of the required assessment(s).	40 CFR 141.153(h)(7)(i)(D)(*1*)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
During the past year we failed to correct all identified defects that were found during the assessment.	40 CFR 141.153(h)(7)(i)(D)(*2*)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
Any system required to conduct a Level 2 assessment due to an *E. coli* MCL violation must include in the report the text found in paragraphs (h)(7)(ii)(A) and (B) of this section, filling in the blanks accordingly and the text found in paragraphs (h)(7)(ii)(C)(1) and (2) of this section, if appropriate.	40 CFR 141.153(h)(7)(ii)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.	40 CFR 141.153(h)(7)(ii)(A)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
We were required to complete a Level 2 assessment because we found *E. coli* in our water system. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.	40 CFR 141.153(h)(7)(ii)(B)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.

Any system that has failed to complete the required assessment or correct all identified sanitary defects, is in violation of the treatment technique requirement and must also include one or both of the following statements, as appropriate:	40 CFR 141.153(h)(7)(ii)(C)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
We failed to conduct the required assessment.	40 CFR 141.153(h)(7)(ii)(C)(*1*)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
We failed to correct all sanitary defects that were identified during the assessment that we conducted.	40 CFR 141.153(h)(7)(ii)(C)(*2*)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
If a system detects *E. coli* and has violated the *E. coli* MCL, in addition to completing the table as required in paragraph (d)(4) of this section, the system must include one or more of the following statements to describe any noncompliance, as applicable:	40 CFR 141.153(h)(7)(iii)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
We had an *E. coli*-positive repeat sample following a total coliform-positive routine sample.	40 CFR 141.153(h)(7)(iii)(A)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample.	40 CFR 141.153(h)(7)(iii)(B)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
We failed to take all required repeat samples following an *E. coli*-positive routine sample.	40 CFR 141.153(h)(7)(iii)(C)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
We failed to test for *E. coli* when any repeat sample tests positive for total coliform.	40 CFR 141.153(h)(7)(iii)(D)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.
If a system detects *E. coli* and has not violated the *E. coli* MCL, in addition to completing the table as required in paragraph (d)(4) of this section, the system may include a statement that explains that although they have detected *E. coli,* they are not in violation of the *E. coli* MCL.	40 CFR 141.153(h)(7)(iv)	R18-4-117	Federal rule text incorporated by reference in R18-4-117.

Summary of Federal Requirement – Appendix A to Subpart O of Part 141 – Regulated Contaminants						
Contaminant (units)	**Traditional MCL in mg/L**	**To convert for CCR, multiply by**	**MCL in CCR units**	**MCLG**	**Major sources in drinking water**	**Health effects language**
Total Coliform Bacteria †	MCL (systems that collect ≥ 40 samples/month) 5% of monthly samples are positive; (systems that collect < 40 samples/month) 1 positive monthly sample.		MCL (systems that collect ≥ 40 samples/month) 5% of monthly samples are positive; (systems that collect < 40 samples/month) 1 positive monthly sample.	0	Naturally present in the environment.	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially- harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Total Coliform Bacteria ‡	TT		TT	N/A	Naturally present in the environment.	Use language found in § 141.153(h)(7)(i)(A)
Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking	Health effects language

Fecal coliform and *E. coli* †	0		0	0	Human and animal fecal waste.	Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
***E. coli* ‡**	Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform- positive repeat sample for *E. coli*.		Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.	0	Human and animal fecal waste.	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION	DIFFERENT FROM FED. REQUIREMENT?
SUBPART Q – PUBLIC NOTIFICATION OF DRINKING WATER VIOLATIONS			
40 CFR 141.202 – TIER 1 PUBLIC NOTICE—FORM, MANNER, AND FREQUENCY OF NOTICE.			
TABLE 1 TO § 141.202—VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 1 PUBLIC NOTICE	40 CFR 141.202(a)	R18-4-119	Federal rule text incorporated by reference in R18-4-119.
Violation of the MCL for *E. coli* (as specified in § 141.63(c));	40 CFR 141.202(a)(1)	R18-4-119	Federal rule text incorporated by reference in R18-4-119.
40 CFR 141.203 – TIER 2 PUBLIC NOTICE—FORM, MANNER, AND FREQUENCY OF NOTICE.			
The public water system must repeat the notice every three months as long as the violation or situation persists, unless the primacy agency determines that appropriate circumstances warrant a different repeat notice frequency. In no circumstance may the repeat notice be given less frequently than once per year. It is not appropriate for the primacy agency to allow less frequent repeat notice for an MCL or treatment technique violation under the Total Coliform Rule or subpart Y of this part or a treatment technique violation under the Surface Water Treatment Rule or Interim Enhanced Surface Water Treatment Rule. It is also not appropriate for the primacy agency to allow through its rules or policies across-the-board reductions in the repeat notice frequency for other ongoing violations requiring a Tier 2 repeat notice. Primacy agency determinations allowing repeat notices to be given less frequently than once every three months must be in writing.	40 CFR 141.203(b)(2)	R18-4-119	Federal rule text incorporated by reference in R18-4-119.
40 CFR 141.204 – TIER 3 PUBLIC NOTICE—FORM, MANNER, AND FREQUENCY OF NOTICE.			
TABLE 1 TO § 141.204—VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 3 PUBLIC NOTICE	40 CFR 141.204(a)	R18-4-119	Federal rule text incorporated by reference in R18-4-119.
Availability of unregulated contaminant monitoring results, as required under § 141.207;	40 CFR 141.204(a)(4)	R18-4-119	Federal rule text incorporated by reference in R18-4-119.

Exceedance of the fluoride secondary maximum contaminant level (SMCL), as required under § 141.208; and	40 CFR 141.204(a)(5)	R18-4-119	Federal rule text incorporated by reference in R18-4-119.
Reporting and Recordkeeping violations under subpart Y of 40 CFR part 141.	40 CFR 141.204(a)(6)	R18-4-119	Federal rule text incorporated by reference in R18-4-119.

Appendix A to Subpart Q of Part 141—NPDWR Violations and Other Situations Requiring Public Notice[1]

Appendix A text incorporated by reference in R18-4-119

Contaminant	MCL/MRDL/TT violations[2] Tier of public notice required	MCL/MRDL/TT violations[2] Citation	Monitoring, testing & reporting procedure violations Tier of public notice required	Monitoring, testing & reporting procedure violations Citation
I. Violations of National Primary Drinking Water Regulations (NPDWR):[3]				
A. Microbiological Contaminants				
1.a Total coliform bacteria †	2	141.63(a)	3	141.21(a)-(e)
1.b Total coliform (TT violations resulting from failure to perform assessments or corrective actions, monitoring violations, and reporting violations) ‡	2	141.860(b)(1)	3	141.860(c)(1) 141.860(d)(1)
1.c Seasonal system failure to follow State-approved start-up plan prior to serving water to the public or failure to provide certification to State. ‡	2	141.860(b)(2)	3	141.860(d)(3)
2.a Fecal coliform/*E. coli* †	1	141.63(b)	[4]1,3	141.21(e)

2.b *E. coli* (MCL, monitoring, and reporting violations) ‡	1	141.860(a)	3	141.860(c)(2) 141.860(d)(1) 141.860(d)(2)
2.c *E. coli* (TT violations resulting from failure to perform level 2 Assessments or corrective action) ‡	2	141.860(b)(1)		

Appendix A—Endnotes † Until March 31, 2016. ‡ Beginning April 1, 2016.

1. Violations and other situations not listed in this table (e.g., failure to prepare Consumer Confidence Reports), do not require notice, unless otherwise determined by the primacy agency. Primacy agencies may, at their option, also require a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2 instead of Tier 3) for specific violations and situations listed in this Appendix, as authorized under § 141.202(a) and § 141.203(a).
2. MCL – Maximum contaminant level, MRDL – Maximum residual disinfectant level, TT – Treatment technique
3. The term Violations of National Primary Drinking Water Regulations (NPDWR) is used here to include violations of MCL, MRDL, treatment technique, monitoring, and testing procedure requirements.
4. Failure to test for fecal coliform or *E. coli* is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3.

Appendix B to Subpart Q of Part 141—Standard Health Effects Language for Public Notification

Appendix B text incorporated by reference in R18-4-119

Contaminant	MCLG[1] mg/L	MCL[2] mg/L	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR)			
A. Microbiological Contaminants			
1a. Total coliform †	Zero	See footnote[3]	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms
1b. Fecal coliform/*E. coli* †	Zero	Zero	Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Contaminant	MCLG[1] mg/L	MCL[2] mg/L	Standard health effects language for public notification
1e. Subpart Y Coliform Assessment and/or Corrective Action Violations ‡	N/A	TT	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found. [THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.] We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment(s).
1f. Subpart Y *E. coli* Assessment and/or Corrective Action Violations ‡	N/A	TT	E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for E. coli, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. [THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.] We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment that we conducted.

Contaminant	MCLG[1] mg/L	MCL[2] mg/L	Standard health effects language for public notification
1g. *E. coli* ‡	Zero	In compliance unless one of the following conditions occurs: (1) The system has an *E. coli*-positive repeat sample following a total coliform-positive routine sample. (2) The system has a total coliform-positive repeat sample following an *E. coli*-positive routine sample. (3) The system fails to take all required repeat samples following an *E. coli*-positive routine sample. (4) The system fails to test for *E. coli* when any repeat sample tests	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.
1h. Subpart Y Seasonal System TT Violations ‡	N/A	TT	When this violation includes the failure to monitor for total coliforms or *E. coli* prior to serving water to the public, the mandatory language found at 141.205(d)(2) must be used.

† Until March 31, 2016. ‡ Beginning April 1, 2016.

1. MCLG—Maximum contaminant level goal
2. MCL—Maximum contaminant level
3. For water systems analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For systems analyzing fewer than 40 samples per month, no more than one sample per month may be positive for total coliforms.

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION	DIFFERENT FROM FED. REQUIREMENT?
SUBPART S – GROUND WATER RULE			
40 CFR 141.402 GROUND WATER SOURCE MICROBIAL MONITORING AND ANALYTICAL METHODS.			
Triggered source water monitoring—	40 CFR 141.402(a)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
General requirements. A ground water system must conduct triggered source water monitoring if the conditions identified in paragraphs (a)(1)(i) and either (a)(1)(ii) or (a)(1)(iii) of this section exist.	40 CFR 141.402(a)(1)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
The system does not provide at least 4-log treatment of viruses (using inactivation, removal, or a State- approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source; and either	40 CFR 141.402(a)(1)(i)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
The system is notified that a sample collected under § 141.21(a) is total coliform-positive and the sample is not invalidated under § 141.21(c) until March 31, 2016, or	40 CFR 141.402(a)(1)(ii)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
The system is notified that a sample collected under §§ 141.854 through 141.857 is total coliform-positive and the sample is not invalidated under § 141.853(c) beginning April 1, 2016.	40 CFR 141.402(a)(1)(iii)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
Sampling requirements. A ground water system must collect, within 24 hours of notification of the total coliform-positive sample, at least one ground water source sample from each ground water source in use at the time the total coliform-positive sample was collected under § 141.21(a) until March 31, 2016, or collected under §§ 141.854 through 141.857 beginning April 1, 2016, except as provided in paragraph (a)(2)(ii) of this section.	40 CFR 141.402(a)(2)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
The State may extend the 24-hour time limit on a case- by-case basis if the system cannot collect the ground water source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the State must specify how much time the system has to collect the sample.	40 CFR 141.402(a)(2)(i)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
If approved by the State, systems with more than one ground water source may meet the requirements of this paragraph (a)(2) by sampling a	40 CFR 141.402(a)(2)(ii)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.

representative ground water source or sources. If directed by the State, systems must submit for State approval a triggered source water monitoring plan that identifies one or more ground water sources that are representative of each monitoring site in the system's sample siting plan under § 141.21(a) until March 31, 2016, or under § 141.853 beginning April 1, 2016, and that the system intends to use for representative sampling under this paragraph.			
Until March 31, 2016, a ground water system serving 1,000 or fewer people may use a repeat sample collected from a ground water source to meet both the requirements of § 141.21(b) and to satisfy the monitoring requirements of paragraph (a)(2) of this section for that ground water source only if the State approves the use of *E. coli* as a fecal indicator for source water monitoring under this paragraph (a). If the repeat sample collected from the ground water source is *E. coli*-positive, the system must comply with paragraph (a)(3) of this section.	40 CFR 141.402(a)(2)(iii)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
Beginning April 1, 2016, a ground water system serving 1,000 or fewer people may use a repeat sample collected from a ground water source to meet both the requirements of subpart Y and to satisfy the monitoring requirements of paragraph (a)(2) of this section for that ground water source only if the State approves the use of *E. coli* as a fecal indicator for source water monitoring under this paragraph (a) and approves the use of a single sample for meeting both the triggered source water monitoring requirements in this paragraph (a) and the repeat monitoring requirements in § 141.858. If the repeat sample collected from the ground water source is *E. coli*-positive, the system must comply with paragraph (a)(3) of this section.	40 CFR 141.402(a)(2)(iv)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
Additional requirements. If the State does not require corrective action under § 141.403(a)(2) for a fecal indicator-positive source water sample collected under paragraph (a)(2) of this section that is not invalidated under paragraph (d) of this section, the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator-positive sample.	40 CFR 141.402(a)(3)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
Consecutive and wholesale systems.	40 CFR 141.402(a)(4)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.

In addition to the other requirements of this paragraph (a), a consecutive ground water system that has a total coliform-positive sample collected under § 141.21(a) until March 31, 2016, or under §§ 141.854 through 141.857 beginning April 1, 2016, must notify the wholesale system(s) within 24 hours of being notified of the total coliform-positive sample.	40 CFR 141.402(a)(4)(i)	R18-4-121(B)	The federal text is modified as follows: (i) In addition to the other requirements of this paragraph (a), a consecutive ground water system that has a total coliform-positive sample, collected under § 141.21(a) until March 31, 2016 or under §§ 141.854 through 141.857 beginning April 1, 2016, within 24 hours of being notified of the total coliform-positive sample must: (A) Notify the wholesale system(s) and, (B) Collect a sample from its consecutive connection with the wholesale ground water system and analyze it for a fecal indicator under paragraph (c) of this section.
In addition to the other requirements of this paragraph (a), a wholesale ground water system must comply with paragraphs (a)(4)(ii)(A) and (a)(4)(ii)(B) of this section.	40 CFR 141.402(a)(4)(ii)	R18-4-121(B)	The federal text is modified as follows: (ii) If the sample collected under paragraph (a)(4)(i)(B) of this section is fecal indicator-positive, within 24 hours:
A wholesale ground water system that receives notice from a consecutive system it serves that a sample collected under § 141.21(a) until March 31, 2016, or collected under §§ 141.854 through 141.857 beginning April 1, 2016, is total coliform-positive must, within 24 hours of being notified, collect a sample from its ground water source(s) under paragraph (a)(2) of this section and analyze it for a fecal indicator under paragraph (c) of this section.	40 CFR 141.402(a)(4)(ii)(A)	R18-4-121(B)	The federal text is modified as follows: (ii) If the sample collected under paragraph (a)(4)(i)(B) of this section is fecal indicator-positive, within 24 hours:

			(A) The consecutive system must notify the wholesale ground water system, and (B) Both systems must consult with the Department on additional sampling to meet the requirements of paragraph (a)(3) of this section.
If the sample collected under paragraph (a)(4)(ii)(A) of this section is fecal indicator-positive, the wholesale ground water system must notify all consecutive systems served by that ground water source of the fecal indicator source water positive within 24 hours of being notified of the ground water source sample monitoring result and must meet the requirements of paragraph (a)(3) of this section.	40 CFR 141.402(a)(4)(ii)(B)	R18-4-121(B)	The federal text is modified as follows: (ii) If the sample collected under paragraph (a)(4)(i)(B) of this section is fecal indicator-positive, within 24 hours: (A) The consecutive system must notify the wholesale ground water system, and (B) Both systems must consult with the Department on additional sampling to meet the requirements of paragraph (a)(3) of this section.
Exceptions to the triggered source water monitoring requirements. A ground water system is not required to comply with the source water monitoring requirements of paragraph (a) of this section if either of the following conditions exists:	40 CFR 141.402(a)(5)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
The State determines, and documents in writing, that the total coliform-positive sample collected under § 141.21(a) until March 31, 2016, or under §§ 141.854 through 141.857 beginning April 1, 2016, is caused by a distribution system deficiency; or	40 CFR 141.402(a)(5)(i)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
The total coliform-positive sample collected under § 141.21(a) until March 31, 2016, or under §§ 141.854 through 141.857 beginning April 1, 2016, is collected at a location that	40 CFR 141.402(a)(5)(ii)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.

meets State criteria for distribution system conditions that will cause total coliform- positive samples.			
40 CFR 141.405 REPORTING AND RECORDKEEPING FOR GROUND WATER SYSTEMS.			
For consecutive systems, documentation of notification to the wholesale system(s) of total coliform-positive samples that are not invalidated under § 141.21(c) until March 31, 2016, or under § 141.853 beginning April 1, 2016. Documentation shall be kept for a period of not less than five years.	40 CFR 141.405(b)(4)	R18-4-121(A)	Federal rule text incorporated by reference in R18-4-121.
SUBPART X – AIRCRAFT DRINKING WATER RULE			
40 CFR 141.803 COLIFORM SAMPLING.			
Air carriers must conduct analyses for total coliform and *E. coli* in accordance with the analytical methods approved in § 141.21(f)(3) and 141.21(f)(6)) until March 31, 2016, and in accordance with the analytical methods approved in § 141.852 beginning April 1, 2016.	40 CFR 141.803(a)(3)	N/A	ADEQ is not seeking primacy of this rule
The invalidation of a total coliform sample result can be made only by the Administrator in accordance with § 141.21(c)(1)(i), (ii), or (iii) or by the certified laboratory in accordance with § 141.21(c)(2) until March 31, 2016, or in accordance with § 141.853(c) beginning April 1, 2016, with the Administrator acting as the State.	40 CFR 141.803(a)(5)	N/A	ADEQ is not seeking primacy of this rule
SUBPART Y – REVISED TOTAL COLIFORM RULE			
40 CFR 141.851 GENERAL.			
General. The provisions of this subpart include both maximum contaminant level and treatment technique requirements.	40 CFR 141.851(a)	R18-4-126	Federal rule text incorporated by reference in R18-4-126.
Applicability. The provisions of this subpart apply to all public water systems.	40 CFR 141.851(b)	R18-4-126	Federal rule text incorporated by reference in R18-4-126.
Compliance date. Systems must comply with the provisions of this subpart beginning April 1, 2016, unless otherwise specified in this subpart.	40 CFR 141.851(c)	R18-4-126	Federal rule text incorporated by reference in R18-4-126.
Implementation with EPA as State. Systems falling under direct oversight of EPA, where EPA acts as the State, must comply with decisions made by EPA for implementation of subpart Y. EPA has authority to establish such procedures and criteria as are necessary to implement subpart Y.	40 CFR 141.851(d)	Not incorporated by reference	This text refers to when EPA acts as the State.

Violations of national primary drinking water regulations. Failure to comply with the applicable requirements of §§ 141.851 through 141.861, including requirements established by the State pursuant to these provisions, is a violation of the national primary drinking water regulations under subpart Y.	40 CFR 141.851(e)	R18-4-126	Federal rule text incorporated by reference in R18-4-126.
40 CFR 141.852 ANALYTICAL METHODS AND LABORATORY CERTIFICATION.			
Analytical methodology	40 CFR 141.852(a)	R9-14-611 R9-14-610.B. Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. The rules can be found in Arizona Administrative Code (A.A.C.) R9-14. See Appendix B and Section 3.1 Difference between State and Federal. Analytical requirements are found in A.A.C. R9-14-611 and A.A.C. R9-14 Table 6.2.A (page 29).
The standard sample volume required for analysis, regardless of analytical method used, is 100 ml.	40 CFR 141.852(a)(1)	R9-14-611 R9-14-610(B)	Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. Methods referred to in A.A.C. R9-14 Table 6.2.A (page 29) specify this federal requirement in the sample collection portion of the methods.
Systems need only determine the presence or absence of total coliforms and *E. coli*; a determination of density is not required.	40 CFR 141.852(a)(2)	R18-4-109	R18-4-109 incorporates all federal Drinking Water MCLs, including 40 CFR

			141.63 for microbiological contaminants.
The time from sample collection to initiation of test medium incubation may not exceed 30 hours. Systems are encouraged but not required to hold samples below 10 deg. C during transit.	40 CFR 141.852(a)(3)	R9-14-611(A)	Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. Methods referred to in A.A.C. R9-14 Table 6.2.A (page 29) specify this federal requirement in the preservation and storage portion of the methods.
If water having residual chlorine (measured as free, combined, or total chlorine) is to be analyzed, sufficient sodium thiosulfate ($Na_2S_2O_3$) must be added to the sample bottle before sterilization to neutralize any residual chlorine in the water sample. Dechlorination procedures are addressed in Section 9060A.2 of *Standard Methods for the Examination of Water and Wastewater* (20th and 21st editions).	40 CFR 141.852(a)(4)	R9-14-611(A)	Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. Methods referred to in A.A.C. R9-14 Table 6.2.A (page 29) specify this federal requirement in the sample preparation portion of the methods.
Systems must conduct total coliform and *E. coli* analyses in accordance with one of the analytical methods in the following table or one of the alternative methods listed in Appendix A to subpart C of part 141.	40 CFR 141.852(a)(5)	R9-14-611(A)	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. Analytical requirements are found in A.A.C. R9-14-611 and A.A.C. R-9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Table 6.2.B part

			1 Microbiology of Wastewater and Sewer Sludge (page 42).

Organism	Methodology Category	Method [1]	Citation [1]
The following methods are incorporated throughout Tables 6.2.A (page 29) and Table 6.2.B (page 42) in R-9-14 Article 6. Arizona Department of Health Services incorporate Standard *Methods for the Examination of Water and Wastewater* 22nd edition (2012) for analytical methods SM9221 and SM9222, rather than the 20th or 21st editions.			
Total Coliforms	Lactose Fermentation Methods	Standard Total Coliform Fermentation Technique	Standard Methods 9221 B.1, B.2 (20th ed.; 21st ed.) [2, 3] Standard Methods Online 9221 B.1, B.2–99 [2, 3]
Total Coliforms	Lactose Fermentation Methods	Presence-Absence (P–A) Coliform Test	Standard Methods 9221 D.1, D.2 (20th ed.; 21st ed.) [2, 7] Standard Methods Online 9221 D.1, D.2–99 [2, 7]
Total Coliforms	Membrane Filtration Methods	Standard Total Coliform Membrane Filter Procedure	Standard Methods 9222 B, C (20th ed.; 21st ed.) [2, 4] Standard Methods Online 9222 B–97 [2, 4], 9222 C–97 [2, 4]
Total Coliforms	Membrane Filtration Methods	Membrane Filtration using MI medium m-ColiBlue24® Test [2, 4] Chromocult [2, 4]	EPA Method 1604 [2]
Total Coliforms	Enzyme Substrate Methods	Colilert®	Standard Methods 9223 B (20th ed.; 21st ed.) [2, 5] Standard Methods Online 9223 B–97 [2, 5]
Total Coliforms	Enzyme Substrate Methods	Colisure®	Standard Methods 9223 B (20th ed.; 21st ed.) [2, 5, 6] Standard Methods Online 9223 B–97 [2, 5, 6]

Organism	Methodology Category	Method [1]	Citation [1]
The following methods are incorporated throughout Tables 6.2.A (page 29) and Table 6.2.B (page 42) in R-9-14 Article 6. Arizona Department of Health Services incorporate Standard *Methods for the Examination of Water and Wastewater* 22nd edition (2012) for analytical methods SM9221 and SM9222, rather than the 20th or 21st editions.			
Total Coliforms	Enzyme Substrate Methods	E*Colite® Test [2] Readycult® Test [2] modified Colitag® Test [2]	
Escherichia coli	*Escherichia coli* Procedure (following Lactose Fermentation Methods) *Escherichia coli* Partition Method	EC–MUG medium	Standard Methods 9221 F.1 (20th ed.; 21st ed.) [2]
Escherichia coli	*Escherichia coli* Partition Method	EC broth with MUG (EC–MUG)	Standard Methods 9222 G.1c(2) (20th ed.; 21st ed.) [2, 8]
Escherichia coli	*Escherichia coli* Partition Method	NA–MUG medium	Standard Methods 9222 G.1c(1) (20th ed.; 21st ed.) [2]
Escherichia coli	Membrane Filtration Methods	Membrane Filtration using MI medium m-ColiBlue24® Test [2, 4] Chromocult [2, 4]	EPA Method 1604 [2]
Escherichia coli	Enzyme Substrate Methods	Colilert®	Standard Methods 9223 B (20th ed.; 21st ed.) [2, 5] Standard Methods Online 9223 B–97 [2, 5, 6]

Organism	Methodology Category	Method [1]	Citation [1]
The following methods are incorporated throughout Tables 6.2.A (page 29) and Table 6.2.B (page 42) in R-9-14 Article 6. Arizona Department of Health Services incorporate Standard *Methods for the Examination of Water and Wastewater* 22nd edition (2012) for analytical methods SM9221 and SM9222, rather than the 20th or 21st editions.			
Escherichia coli	Enzyme Substrate Methods	Colisure®	Standard Methods 9223 B (20th ed.; 21st ed.) [2, 5, 6] Standard Methods Online 9223 B–97 [2, 5, 6]
Escherichia coli	Enzyme Substrate Methods	E*Colite® Test [2] Readycult® Test [2] modified Colitag® Test [2]	

1. The procedures must be done in accordance with the documents listed in paragraph (c) of this section. For Standard Methods, either editions, 20th (1998) or 21st (2005), may be used. For the Standard Methods Online, the year in which each method was approved by the Standard Methods Committee is designated by the last two digits following the hyphen in the method number. The methods listed are the only online versions that may be used. For vendor methods, the date of the method listed in paragraph (c) of this section is the date/version of the approved method. The methods listed are the only versions that may be used for compliance with this rule. Laboratories should be careful to use only the approved versions of the methods, as product package inserts may not be the same as the approved versions of the methods.
2. Incorporated by reference. See paragraph (c) of this section.
3. Lactose broth, as commercially available, may be used in lieu of lauryl tryptose broth, if the system conducts at least 25 parallel tests between lactose broth and lauryl tryptose broth using the water normally tested, and if the findings from this comparison demonstrate that the false-positive rate and false-negative rate for total coliforms, using lactose broth, is less than 10 percent.
4. All filtration series must begin with membrane filtration equipment that has been sterilized by autoclaving. Exposure of filtration equipment to UV light is not adequate to ensure sterilization. Subsequent to the initial autoclaving, exposure of the filtration equipment to UV light may be used to sanitize the funnels between filtrations within a filtration series. Alternatively, membrane filtration equipment that is pre-sterilized by the manufacturer (i.e., disposable funnel units) may be used.
5. Multiple-tube and multi-well enumerative formats for this method are approved for use in presence-absence determination under this regulation.
6. Colisure® results may be read after an incubation time of 24 hours.
7. A multiple tube enumerative format, as described in *Standard Methods for the Examination of Water and Wastewater* 9221, is approved for this method for use in presence- absence determination under this regulation.
8. The following changes must be made to the EC broth with MUG (EC–MUG) formulation: Potassium dihydrogen phosphate, KH_2PO_4, mustbe 1.5g, and 4-methylumbelliferyl-Beta-D-glucuronide must be 0.05 g.

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Laboratory certification. Systems must have all compliance samples required under this subpart analyzed by a laboratory certified by the EPA or a primacy State to analyze drinking water samples. The laboratory used by the system must be certified for each method (and associated contaminant(s)) used for compliance monitoring analyses under this rule.	40 CFR 141.852(b)	R9-14-616(1)	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. Analytical requirements for compliance samples are found in A.A.C. R9-14-616 (1)
Incorporation by reference. The standards required in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, EPA must publish notice of change in the Federal Register and the material must be available to the public. All approved material is available for inspection either electronically at www.regulations.gov, in hard copy at the Water Docket, or from the sources indicated below. The Docket ID is EPA–HQ–OW–2008–0878. Hard copies of these documents may be viewed at the Water Docket in the EPA Docket Center, (EPA/DC) EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, *excluding legal holidays.* The telephone number for the Public Reading Room is 1– 202–566–1744, and the telephone number for the Water Docket is 1–202–566–2426. Copyrighted materials are only available for viewing in hard copy. These documents are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 1–202–741–6030 or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.	40 CFR 141.852(c)	A.A.C. R9-14-610(B) A.A.C. R9-14-610(B)Table 1	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. The methods are found in A.A.C. R9-14-610 (B) and Table 1.

American Public Health Association, 800 I Street, NW., Washington, DC 20001.	40 CFR 141.852(c)(1)	R9-14-610.B Table 1 C, C8 and E5	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012), C8 (page 18) Standard Methods for the Examination of Water and Wastewater (20th edition 1998), and E5 (page 18) Standard Methods for the Examination of Water and Wastewater (18th edition 1992).
"Standard Methods for the Examination of Water and Wastewater," 20th edition (1998):	40 CFR 141.852(c)(1)(i)	R9-14-610 Table 1 C8	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14-610 Table 1 C8 (page 18) Standard Methods for the Examination of Water and Wastewater (20th edition 1998).
Standard Methods 9221, "Multiple-Tube Fermentation Technique for Members of the Coliform Group," B.1, B.2, "Standard Total Coliform	40 CFR 141.852 (c)(1)(i)(A)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical

Fermentation Technique."			methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9221, "Multiple-Tube Fermentation Technique for Members of the Coliform Group," D.1, D.2, "Presence-Absence (P–A) Coliform Test."	40 CFR 141.852 (c)(1)(i)(B)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," B, "Standard Total Coliform Membrane Filter Procedure."	40 CFR 141.852 (c)(1)(i)(C)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department

			of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," C, "Delayed- Incubation Total Coliform Procedure."	40 CFR 141.852 (c)(1)(i)(D)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9223, "Enzyme Substrate Coliform Test," B, "Enzyme Substrate Test," Colilert® and Colisure®.	40 CFR 141.852 (c)(1)(i)(E)	R9-14-610 Table 1 C2 and Z7	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has

			sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C2 (page 17) Standard Methods for the Examination of Water and Wastewater (21st edition 2005) and Z7 (page 20).
Standard Methods 9221, "Multiple Tube Fermentation Technique for Members of the Coliform Group," F.1, "*Escherichia coli* Procedure: EC–MUG medium."	40 CFR 141.852 (c)(1)(i)(F)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," G.1.c(2), "*Escherichia coli* Partition Method: EC broth with MUG (EC–MUG)."	40 CFR 141.852 (c)(1)(i)(G)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to

			regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," G.1.c(1), "*Escherichia coli* Partition Method: NA–MUG medium."	40 CFR 141.852 (c)(1)(i)(H)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
"Standard Methods for the Examination of Water and Wastewater," 21st edition (2005):	40 CFR 141.852(c)(1)(ii)	R9-14-610 Table 1 C2	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and

			analytical methods. This method is found in A.A.C. R9-14-610 Table 1 C2 (page 17) Standard Methods for the Examination of Water and Wastewater (21st edition 2005).
Standard Methods 9221, "Multiple-Tube Fermentation Technique for Members of the Coliform Group," B.1, B.2, "Standard Total Coliform Fermentation Technique."	40 CFR 141.852 (c)(1)(ii)(A)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9221, "Multiple-Tube Fermentation Technique for Members of the Coliform Group," D.1, D.2, "Presence-Absence (P–A) Coliform Test."	40 CFR 141.852 (c)(1)(ii)(B)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key

			Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," B, "Standard Total Coliform Membrane Filter Procedure."	40 CFR 141.852 (c)(1)(ii)(C)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," C, "Delayed- Incubation Total Coliform Procedure."	40 CFR 141.852 (c)(1)(ii)(D)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-

			14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9223, "Enzyme Substrate Coliform Test," B, "Enzyme Substrate Test," Colilert® and Colisure®.	40 CFR 141.852 (c)(1)(ii)(E)	R9-14-610 Table 1 C2 and Z7	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C2 (page 17) Standard Methods for the Examination of Water and Wastewater (21st edition 2005) and Z7 (page 20).
Standard Methods 9221, "Multiple Tube Fermentation Technique for Members of the Coliform Group," F.1, "*Escherichia coli* Procedure: EC–MUG medium."	40 CFR 141.852 (c)(1)(ii)(F)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17)

			Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," G.1.c(2), "*Escherichia coli* Partition Method: EC broth with MUG (EC–MUG)."	40 CFR 141.852 (c)(1)(ii)(G)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods 9222, "Membrane Filter Technique for Members of the Coliform Group," G.1.c(1), "*Escherichia coli* Partition Method: NA–MUG medium."	40 CFR 141.852 (c)(1)(ii)(H)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the

			Examination of Water and Wastewater (22nd edition 2012).
"Standard Methods Online" available at http://www.standardmethods.org:	40 CFR 141.852(c)(1)(iii)	R9-14-610 Table 1 C	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods Online 9221, "Multiple-Tube Fermentation Technique for Members of the Coliform Group" (1999), B.1, B.2–99, "Standard Total Coliform Fermentation Technique."	40 CFR 141.852 (c)(1)(iii)(A)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).

Standard Methods Online 9221, "Multiple-Tube Fermentation Technique for Members of the Coliform Group" (1999), D.1, D.2–99, "Presence-Absence (P–A) Coliform Test."	40 CFR 141.852 (c)(1)(iii)(B)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods Online 9222, "Membrane Filter Technique for Members of the Coliform Group" (1997), B–97, "Standard Total Coliform Membrane Filter Procedure."	40 CFR 141.852 (c)(1)(iii)(C)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).

Standard Methods Online 9222, "Membrane Filter Technique for Members of the Coliform Group" (1997), C–97, "Delayed-Incubation Total Coliform Procedure."	40 CFR 141.852 (c)(1)(iii)(D)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Standard Methods Online 9223, "Enzyme Substrate Coliform Test" (1997), B–97, "Enzyme Substrate Test", Colilert® and Colisure®.	40 CFR 141.852 (c)(1)(iii)(E)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C, C2, Z, Z5, and Z7(page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).

Charm Sciences, Inc., 659 Andover Street, Lawrence, MA 01843–1032, telephone 1–800–343–2170:	40 CFR 141.852(c)(2)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C & Z8 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
E*Colite®—"Charm E*Colite™ Presence/Absence Test for Detection and Identification of Coliform Bacteria and *Escherichia coli* in Drinking Water," January 9, 1998.	40 CFR 141.852(c)(2)(i)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C & Z8 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
[Reserved]	40 CFR	N/A	

	141.852(c)(2)(ii)		
CPI International, Inc., 5580 Skylane Blvd., Santa Rosa, CA, 95403, telephone 1–800–878–7654:	40 CFR 141.852(c)(3)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference Z5 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
modified Colitag®, ATP D05–0035—"Modified Colitag™ Test Method for the Simultaneous Detection of *E. coli* and other Total Coliforms in Water," August 28, 2009.	40 CFR 141.852(c)(3)(i)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C & Z5 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).

[Reserved]	40 CFR 141.852(c)(3)(ii)	N/A	
EMD Millipore (a division of Merck KGaA, Darmstadt Germany), 290 Concord Road, Billerica, MA 01821, telephone 1–800–645–5476:	40 CFR 141.852(c)(4)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C, Z14 & Z15 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
Chromocult—"Chromocult® Coliform Agar Presence/Absence Membrane Filter Test Method for Detection and Identification of Coliform Bacteria and *Escherichia coli* for Finished Waters," November 2000, Version 1.0.	40 CFR 141.852(c)(4)(i)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C & Z15 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination

			of Water and Wastewater (22nd edition 2012).
Readycult®—"Readycult® Coliforms 100 Presence/Absence Test for Detection and Identification of Coliform Bacteria and *Escherichia coli* in Finished Waters," January 2007, Version 1.1.	40 CFR 141.852(c)(4)(ii)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C & Z14 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
EPA's Water Resource Center (MC–4100T), 1200 Pennsylvania Avenue NW., Washington, DC 20460, telephone 1–202–566–1729:	40 CFR 141.852(c)(5)	R9-14-610.A4.36	Federal analytical methods are incorporated by ADHS.
EPA Method 1604, EPA 821–R–02–024—"EPA Method 1604: Total Coliforms and *Escherichia coli* in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium)," September 2002, http://www.epa.gov/nerlcwww/1604sp02.pdf.	40 CFR 141.852(c)(5)(i)	R9-14-610.A4.36 1604	Federal analytical methods are incorporated by ADHS.
[Reserved]	40 CFR 141.852(c)(5)(ii)	N/A	
Hach Company, P.O. Box 389, Loveland, CO 80539, telephone 1–800–604–3493:	40 CFR 141.852(c)(6)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This

			method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference Z6 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
m-ColiBlue24®—"Membrane Filtration Method m- ColiBlue24® Broth," Revision 2, August 17, 1999.	40 CFR 141.852(c)(6)(i)	R9-14-611(A) R9-14 Table 6.2.A	ADEQ does not regulate laboratory's analytical methods. Arizona Department of Health Services (ADHS) has sole statutory authority to regulate laboratories and analytical methods. This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water, reference C & Z6 (page 29) and Key Reference found in A.A.C. R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012).
[Reserved]	40 CFR 141.852(c)(6)(ii)	N/A	
40 CFR 141.853 GENERAL MONITORING REQUIREMENTS FOR ALL PUBLIC WATER SYSTEMS.			
Sample siting plans.	40 CFR 141.853(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Systems must develop a written sample siting plan that identifies sampling sites and a sample collection schedule that are representative of water	40 CFR 141.853(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

throughout the distribution system not later than March 31, 2016. These plans are subject to State review and revision. Systems must collect total coliform samples according to the written sample siting plan. Monitoring required by §§ 141.854 through 141.858 may take place at a customer's premise, dedicated sampling station, or other designated compliance sampling location. Routine and repeat sample sites and any sampling points necessary to meet the requirements of subpart S must be reflected in the sampling plan.			
Systems must collect samples at regular time intervals throughout the month, except that systems that use only ground water and serve 4,900 or fewer people may collect all required samples on a single day if they are taken from different sites.	40 CFR 141.853(a)(2)	R18-4-126(A) (A)	Federal rule text incorporated by reference in R18-4-126.
Systems must take at least the minimum number of required samples even if the system has had an *E. coli* MCL violation or has exceeded the coliform treatment technique triggers in § 141.859(a).	40 CFR 141.853(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
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 samples and must include the results in calculating whether the coliform treatment technique trigger in § 141.859(a)(1)(i) and (ii) 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.	40 CFR 141.853(a)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Systems must identify repeat monitoring locations in the sample siting plan. Unless the provisions of paragraphs (a)(5)(i) or (a)(5)(ii) of this section are met, the system 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. If a total coliform-positive sample is at the end of the distribution system, or one service connection away from the end of the distribution system, the system must still take all required repeat samples. However, the State may allow an	40 CFR 141.853(a)(5)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

alternative sampling location in lieu of the requirement to collect at least one repeat sample upstream or downstream of the original sampling site. Except as provided for in paragraph (a)(5)(ii) of this section, systems required to conduct triggered source water monitoring under § 141.402(a) must take ground water source sample(s) in addition to repeat samples required under this subpart.			
Systems may propose repeat monitoring locations to the State 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 State may modify the SOP or require alternative monitoring locations as needed.	40 CFR 141.853(a)(5)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Ground water systems serving 1,000 or fewer people may propose repeat sampling locations to the State that differentiate potential source water and distribution system contamination (e.g., by sampling at entry points to the distribution system). A ground water system with a single well required to conduct triggered source water monitoring may, with written State approval, take one of its repeat samples at the monitoring location required for triggered source water monitoring under § 141.402(a) if the system demonstrates to the State's satisfaction that the sample siting plan remains representative of water quality in the distribution system. If approved by the State, the system may use that sample result to meet the monitoring requirements in both § 141.402(a) and this section.	40 CFR 141.853(a)(5)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
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 and must also comply with § 141.402(a)(3). 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 required under § 141.402(a)(3) by the number of repeat samples taken at that location that were not *E. coli*-positive.	40 CFR 141.853(a)(5)(ii)(A)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

If a system takes more than one repeat sample at the monitoring location required for triggered source water monitoring under § 141.402(a), and more than one repeat sample is *E. coli*-positive, the system has violated the *E. coli* MCL and must also comply with § 141.403(a)(1).	40 CFR 141.853(a)(5)(ii)(B)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
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, but is not required to comply with § 141.402(a)(3).	40 CFR 141.853(a)(5)(ii)(C)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
States may review, revise, and approve, as appropriate, repeat sampling proposed by systems under paragraphs (a)(5)(i) and (ii) of this section. The system must demonstrate that the sample siting plan remains representative of the water quality in the distribution system. The State 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.	40 CFR 141.853(a)(6)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Special purpose samples. Special purpose samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, must not be used to determine whether the coliform treatment technique trigger has been exceeded. Repeat samples taken pursuant to § 141.858 are not considered special purpose samples, and must be used to determine whether the coliform treatment technique trigger has been exceeded.	40 CFR 141.853(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Invalidation of total coliform samples. A total coliform-positive sample invalidated under this paragraph (c) of this section does not count toward meeting the minimum monitoring requirements of this subpart.	40 CFR 141.853(c)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may invalidate a total coliform-positive sample only if the conditions of paragraph (c)(1)(i), (ii), or (iii) of this section are met.	40 CFR 141.853(c)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The laboratory establishes that improper sample analysis caused the total coliform-positive result.	40 CFR 141.853(c)(1)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

The State, on the basis of the results of repeat samples collected as required under § 141.858(a), determines that the total coliform-positive sample resulted from a domestic or other non-distribution system plumbing problem. The State cannot invalidate a sample on the basis of repeat sample results unless all repeat sample(s) collected at the same tap as the original total coliform-positive sample are also total coliform-positive, and all repeat samples collected at a location other than the original tap are total coliform-negative (e.g., a State cannot invalidate a total coliform-positive sample on the basis of repeat samples if all the repeat samples are total coliform-negative, or if the system has only one service connection).	40 CFR 141.853(c)(1)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State has substantial grounds to believe that a total coliform-positive result is due to a circumstance or condition that does not reflect water quality in the distribution system. In this case, the system must still collect all repeat samples required under § 141.858(a), and use them to determine whether a coliform treatment technique trigger in § 141.859 has been exceeded. To invalidate a total coliform-positive sample under this paragraph, the decision and supporting rationale must be documented in writing, and approved and signed by the supervisor of the State official who recommended the decision. The State must make this document available to EPA and the public. The written documentation must state the specific cause of the total coliform-positive sample, and what action the system has taken, or will take, to correct this problem. The State may not invalidate a total coliform-positive sample solely on the grounds that all repeat samples are total coliform-negative.	40 CFR 141.853(c)(1)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A laboratory must invalidate a total coliform sample (unless total coliforms are detected) 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 must collect another sample from	40 CFR 141.853(c)(2)	R9-14-610.D14	ADEQ complies with laboratory's analytical methods as regulated by Arizona Department of Health Services (ADHS). This method is found in A.A.C. R9-14 Table 6.2.A part 1. Microbiology of Drinking Water (page 29) and Key Reference found in A.A.C.

the same location as the original sample within 24 hours of being notified of the interference problem, and have it analyzed for the presence of total coliforms. The system must continue to re-sample within 24 hours and have the samples analyzed until it obtains a valid result. The State may waive the 24-hour time limit on a case-by-case basis. Alternatively, the State may implement criteria for waiving the 24-hour sampling time limit to use in lieu of case-by-case extensions.			R9-14-610 Table 1 C (page 17) Standard Methods for the Examination of Water and Wastewater (22nd edition 2012). ADEQ requires an official letter from the laboratory stating that there was a method discrepancy and that the results should be invalidated. The system is then required to resample as stated in 40 CFR 141.853(c)(2).
40 CFR 141.854 ROUTINE MONITORING REQUIREMENTS FOR NON-COMMUNITY WATER SYSTEMS SERVING 1,000 OR FEWER PEOPLE USING ONLY GROUND WATER.			
General.	40 CFR 141.854(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The provisions of this section apply to non-community water systems using only ground water (except ground water under the direct influence of surface water, as defined in § 141.2) and serving 1,000 or fewer people.	40 CFR 141.854(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Following any total coliform-positive sample taken under the provisions of this section, systems must comply with the repeat monitoring requirements and *E. coli* analytical requirements in § 141.858.	40 CFR 141.854(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Once all monitoring required by this section and § 141.858 for a calendar month has been completed, systems must determine whether any coliform treatment technique triggers specified in § 141.859 have been exceeded. If any trigger has been exceeded, systems must complete assessments as required by § 141.859.	40 CFR 141.854(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
For the purpose of determining eligibility for remaining on or qualifying for quarterly monitoring under the provisions of paragraphs (f)(4) and (g)(2), respectively, of this section for transient non- community water systems, the State may elect to not count monitoring violations under §	40 CFR 141.854(a)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

141.860(c)(1) of this part if the missed sample is collected no later than the end of the monitoring period following the monitoring period in which the sample was missed. The system must collect the make-up sample in a different week than the routine sample for that monitoring period and should collect the sample as soon as possible during the monitoring period. The State may not use this provision under paragraph (h) of this section. This authority does not affect the provisions of §§ 141.860(c)(1) and 141.861(a)(4) of this part.			
Monitoring frequency for total coliforms. Systems must monitor each calendar quarter that the system provides water to the public, except for seasonal systems or as provided under paragraphs (c) through (h) and (j) of this section. Seasonal systems must meet the monitoring requirements of paragraph (i) of this section.	40 CFR 141.854(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Transition to subpart Y.	40 CFR 141.854(c)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Systems, including seasonal systems, must continue to monitor according to the total coliform monitoring schedules under § 141.21 that were in effect on March 31, 2016, unless any of the conditions for increased monitoring in paragraph (f) of this section are triggered on or after April 1, 2016, or unless otherwise directed by the State.	40 CFR 141.854(c)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Beginning April 1, 2016, the State must perform a special monitoring evaluation during each sanitary survey to review the status of the system, including the distribution system, to determine whether the system is on an appropriate monitoring schedule. After the State has performed the special monitoring evaluation during each sanitary survey, the State may modify the system's monitoring schedule, as necessary, or it may allow the system to stay on its existing monitoring schedule, consistent with the provisions of this section. The State may not allow systems to begin less frequent monitoring under the special monitoring evaluation unless the system has already met the applicable criteria for less frequent monitoring in this section. For seasonal systems on quarterly or annual monitoring, this evaluation must include review of the approved sample siting plan, which must designate the time period(s) for monitoring based on-site-specific considerations (e.g., during periods of highest demand or highest	40 CFR 141.854(c)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

vulnerability to contamination). The seasonal system must collect compliance samples during these time periods.			
Annual site visits. Beginning no later than calendar year 2017, systems on annual monitoring, including seasonal systems, must have an initial and recurring annual site visit by the State that is equivalent to a Level 2 assessment or an annual voluntary Level 2 assessment that meets the criteria in § 141.859(b) to remain on annual monitoring. The periodic required sanitary survey may be used to meet the requirement for an annual site visit for the year in which the sanitary survey was completed.	40 CFR 141.854(d)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Criteria for annual monitoring. Beginning April 1, 2016, the State may reduce the monitoring frequency for a well-operated ground water system from quarterly routine monitoring to no less than annual monitoring, if the system demonstrates that it meets the criteria for reduced monitoring in paragraphs (e)(1) through (e)(3) of this section, except for a system that has been on increased monitoring under the provisions of paragraph (f) of this section. A system on increased monitoring under paragraph (f) of this section must meet the provisions of paragraph (g) of this section to go to quarterly monitoring and must meet the provisions of paragraph (h) of this section to go to annual monitoring.	40 CFR 141.854(e)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has a clean compliance history for a minimum of 12 months;	40 CFR 141.854(e)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The most recent sanitary survey shows that the system is free of sanitary defects or has corrected all identified sanitary defects, has a protected water source, and meets approved construction standards; and	40 CFR 141.854(e)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State has conducted an annual site visit within the last 12 months and the system has corrected all identified sanitary defects. The system may substitute a Level 2 assessment that meets the criteria in § 141.859(b) for the State annual site visit.	40 CFR 141.854(e)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Increased Monitoring Requirements for systems on quarterly or annual monitoring. A system on quarterly or annual monitoring that experiences any of the events identified in paragraphs (f)(1) through (f)(4) of this section must begin monthly monitoring the month following the event. A system on annual monitoring that experiences the event identified in	40 CFR 141.854(f)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

paragraphs (f)(5) of this section must begin quarterly monitoring the quarter following the event. The system must continue monthly or quarterly monitoring until the requirements in paragraph (g) of this section for quarterly monitoring or paragraph (h) of this section for annual monitoring are met. A system on monthly monitoring for reasons other than those identified in paragraphs (f)(1) through (f)(4) of this section is not considered to be on increased monitoring for the purposes of paragraphs (g) and (h) of this section.			
The system triggers a Level 2 assessment or two Level 1 assessments under the provisions of §141.859 in a rolling 12-month period.	40 CFR 141.854(f)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has an *E. coli* MCL violation.	40 CFR 141.854(f)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has a coliform treatment technique violation.	40 CFR 141.854(f)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has two subpart Y monitoring violations or one subpart Y monitoring violation and one Level 1 assessment under the provisions of § 141.859 in a rolling 12-month period for a system on quarterly monitoring.	40 CFR 141.854(f)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has one subpart Y monitoring violation for a system on annual monitoring.	40 CFR 141.854(f)(5)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Requirements for returning to quarterly monitoring. The State may reduce the monitoring frequency for a system on monthly monitoring triggered under paragraph (f) of this section to quarterly monitoring if the system meets the criteria in paragraphs (g)(1) and (g)(2) of this section.	40 CFR 141.854(g)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Within the last 12 months, the system must have a completed sanitary survey or a site visit by the State or a voluntary Level 2 assessment by a party approved by the State, be free of sanitary defects, and have a protected water source; and	40 CFR 141.854(g)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system must have a clean compliance history for a minimum of 12 months.	40 CFR 141.854(g)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Requirements for systems on increased monitoring to qualify for annual monitoring. The State may reduce the monitoring frequency for a system on increased monitoring under paragraph (f) of this section if the system meets the criteria in paragraph (g) of this section plus the criteria in	40 CFR 141.854(h)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

paragraphs (h)(1) and (h)(2) of this section.			
An annual site visit by the State and correction of all identified sanitary defects. The system may substitute a voluntary Level 2 assessment by a party approved by the State for the State annual site visit in any given year.	40 CFR 141.854(h)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system must have in place or adopt one or more additional enhancements to the water system barriers to contamination in paragraphs (h)(2)(i) through (h)(2)(v) of this section.	40 CFR 141.854(h)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126. The rule states that States *may* allow reduced monitoring for this rule. Arizona has opted to not allow annual reduced monitoring.
Cross connection control, as approved by the State.	40 CFR 141.854(h)(2)(i)	40 CFR 141.854(h)(2)(i) is not incorporated by reference because this provision is already required under A.A.C. R18-4-215 (Backflow Prevention).	This subsection addresses the additional enhancements to quality for reduced monitoring that ADEQ already requires under other regulations. A PWS will have the remaining subsections (iii – v) to choose from for additional enhancements.
An operator certified by an appropriate State certification program or regular visits by a circuit rider certified by an appropriate State certification program.	40 CFR 141.854(h)(2)(ii)	40 CFR 141.854(h)(2)(ii) is not incorporated by reference because this provision is already required under A.A.C. R18-4-202 (Certified Operators).	Since this subsection addresses the additional enhancements to quality for reduced monitoring; ADEQ did not want to include qualifying criteria that ADEQ already requires under other regulations. A PWS will have the remaining subsections (iii – v) to choose from for additional enhancements.
Continuous disinfection entering the distribution system and a residual in the distribution system in accordance with criteria	40 CFR 141.854(h)(2)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

specified by the State.			
Demonstration of maintenance of at least a 4-log removal or inactivation of viruses as provided for under § 141.403(b)(3).	40 CFR 141.854(h)(2)(iv)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Other equivalent enhancements to water system barriers as approved by the State.	40 CFR 141.854(h)(2)(v)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Seasonal systems.	40 CFR 141.854(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Beginning April 1, 2016, all seasonal systems must demonstrate completion of a State-approved start-up procedure, which may include a requirement for startup sampling prior to serving water to the public.	40 CFR 141.854(i)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A seasonal system must monitor every month that it is in operation unless it meets the criteria in paragraphs (i)(2)(i) through (iii) of this section to be eligible for monitoring less frequently than monthly beginning April 1, 2016, except as provided under paragraph (c) of this section.	40 CFR 141.854(i)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Seasonal systems monitoring less frequently than monthly must have an approved sample siting plan that designates the time period for monitoring based on site-specific considerations (e.g., during periods of highest demand or highest vulnerability to contamination). Seasonal systems must collect compliance samples during this time period.	40 CFR 141.854(i)(2)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
To be eligible for quarterly monitoring, the system must meet the criteria in paragraph (g) of this section.	40 CFR 141.854(i)(2)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
To be eligible for annual monitoring, the system must meet the criteria under paragraph (h) of this section.	40 CFR 141.854(i)(2)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may exempt any seasonal system 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, except that systems that monitor less frequently than monthly must still monitor during the vulnerable period designated by the State.	40 CFR 141.854(i)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Additional routine monitoring the month following a total coliform-positive sample. Systems collecting samples on a quarterly or annual frequency must conduct additional routine monitoring the month following one or more total coliform-positive samples (with or without a Level 1 treatment	40 CFR 141.854(j)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

technique trigger). Systems must collect at least three routine samples during the next month, except that the State may waive this requirement if the conditions of paragraph (j)(1), (2), or (3) of this section are met. Systems may either collect samples at regular time intervals throughout the month or may collect all required routine samples on a single day if samples are taken from different sites. Systems must use the results of additional routine samples in coliform treatment technique trigger calculations under § 141.859(a).			
The State may waive the requirement to collect three routine samples the next month in which the system provides water to the public if the State, or an agent approved by the State, performs a site visit before the end of the next month in which the system provides water to the public. Although a sanitary survey need not be performed, the site visit must be sufficiently detailed to allow the State to determine whether additional monitoring and/or any corrective action is needed. The State cannot approve an employee of the system to perform this site visit, even if the employee is an agent approved by the State to perform sanitary surveys.	40 CFR 141.854(j)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may waive the requirement to collect three routine samples the next month in which the system provides water to the public if the State has determined why the sample was total coliform-positive and has established that the system has corrected the problem or will correct the problem before the end of the next month in which the system serves water to the public. In this case, the State must document this decision to waive the following month's additional monitoring requirement in writing, have it approved and signed by the supervisor of the State official who recommends such a decision, and make this document available to the EPA and public. The written documentation must describe the specific cause of the total coliform- positive sample and what action the system has taken and/or will take to correct this problem.	40 CFR 141.854(j)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may not waive the requirement to collect three additional routine samples the next month in which the system provides water to the public solely on the grounds that all repeat samples are total coliform-negative. If the State determines that the system has corrected the contamination problem before the system takes the set of repeat samples	40 CFR 141.854(j)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

required in § 141.858, and all repeat samples were total coliform- negative, the State may waive the requirement for additional routine monitoring the next month.			
40 CFR 141.855 ROUTINE MONITORING REQUIREMENTS FOR COMMUNITY WATER SYSTEMS SERVING 1,000 OR FEWER PEOPLE USING ONLY GROUND WATER.			
General.	40 CFR 141.855(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The provisions of this section apply to community water systems using only ground water (except ground water under the direct influence of surface water, as defined in § 141.2) and serving 1,000 or fewer people.	40 CFR 141.855(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Following any total coliform-positive sample taken under the provisions of this section, systems must comply with the repeat monitoring requirements and *E. coli* analytical requirements in § 141.858.	40 CFR 141.855(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Once all monitoring required by this section and § 141.858 for a calendar month has been completed, systems must determine whether any coliform treatment technique triggers specified in § 141.859 have been exceeded. If any trigger has been exceeded, systems must complete assessments as required by § 141.859.	40 CFR 141.855(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Monitoring frequency for total coliforms. The monitoring frequency for total coliforms is one sample/month, except as provided for under paragraphs (c) through (f) of this section.	40 CFR 141.855(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Transition to subpart Y.	40 CFR 141.855(c)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
All systems must continue to monitor according to the total coliform monitoring schedules under § 141.21 that were in effect on March 31, 2016, unless any of the conditions in paragraph (e) of this section are triggered on or after April 1, 2016, or unless otherwise directed by the State.	40 CFR 141.855(c)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Beginning April 1, 2016, the State must perform a special monitoring evaluation during each sanitary survey to review the status of the system, including the distribution system, to determine whether the system is on an appropriate monitoring schedule. After the State has performed the	40 CFR 141.855(c)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

special monitoring evaluation during each sanitary survey, the State may modify the system's monitoring schedule, as necessary, or it may allow the system to stay on its existing monitoring schedule, consistent with the provisions of this section. The State may not allow systems to begin less frequent monitoring under the special monitoring evaluation unless the system has already met the applicable criteria for less frequent monitoring in this section.			
Criteria for reduced monitoring.	40 CFR 141.855(d)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may reduce the monitoring frequency from monthly monitoring to no less than quarterly monitoring if the system is in compliance with State- certified operator provisions and demonstrates that it meets the criteria in paragraphs (d)(1)(i) through (d)(1)(iii) of this section. A system that loses its certified operator must return to monthly monitoring the month following that loss.	40 CFR 141.855(d)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has a clean compliance history for a minimum of 12 months.	40 CFR 141.855(d)(1)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The most recent sanitary survey shows the system is free of sanitary defects (or has an approved plan and schedule to correct them and is in compliance with the plan and the schedule), has a protected water source and meets approved construction standards.	40 CFR 141.855(d)(1)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system meets at least one of the following criteria:	40 CFR 141.855(d)(1)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126. Systems requesting reduced quarterly monitoring will be evaluated and approved based on the requirements specified in rule.
An annual site visit by the State that is equivalent to a Level 2 assessment or an annual Level 2 assessment by a party approved by the State and correction of all identified sanitary defects (or an approved plan and schedule to correct them and is in compliance with the plan and schedule).	40 CFR 141.855(d)(1)(iii)(A)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126. ADEQ's handling of this is described in more detail on page 85.

Cross connection control, as approved by the State.	40 CFR 141.855(d)(1)(iii)(B)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126. ADEQ's handling of this is described in more detail on page 87.
Continuous disinfection entering the distribution system and a residual in the distribution system in accordance with criteria specified by the State.	40 CFR 141.855(d)(1)(iii)(C)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Demonstration of maintenance of at least a 4-log removal or inactivation of viruses as provided for under § 141.403(b)(3).	40 CFR 141.855(d)(1)(iii)(D)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126. ADEQ's handling of this is described in more detail on page 86.
Other equivalent enhancements to water system barriers as approved by the State.	40 CFR 141.855(d)(1)(iii)(E)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126. ADEQ's handling of this is described in more detail on page 87.
[Reserved]	40 CFR 141.855(d)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Return to routine monthly monitoring requirements. Systems on quarterly monitoring that experience any of the events in paragraphs (e)(1) through (e)(4) of this section must begin monthly monitoring the month following the event. The system must continue monthly monitoring until it meets the reduced monitoring requirements in paragraph (d) of this section.	40 CFR 141.855(e)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system triggers a Level 2 assessment or two Level 1 assessments in a rolling 12-month period.	40 CFR 141.855(e)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has an *E. coli* MCL violation.	40 CFR 141.855(e)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has a coliform treatment technique violation.	40 CFR 141.855(e)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has two subpart Y monitoring violations in a rolling 12-month period.	40 CFR 141.855(e)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

Additional routine monitoring the month following a total coliform-positive sample. Systems collecting samples on a quarterly frequency must conduct additional routine monitoring the month following one or more total coliform-positive samples (with or without a Level 1 treatment technique trigger). Systems must collect at least three routine samples during the next month, except that the State may waive this requirement if the conditions of paragraph (f)(1), (2), or (3) of this section are met. Systems may either collect samples at regular time intervals throughout the month or may collect all required routine samples on a single day if samples are taken from different sites. Systems must use the results of additional routine samples in coliform treatment technique trigger calculations.	40 CFR 141.855(f)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may waive the requirement to collect three routine samples the next month in which the system provides water to the public if the State, or an agent approved by the State, performs a site visit before the end of the next month in which the system provides water to the public. Although a sanitary survey need not be performed, the site visit must be sufficiently detailed to allow the State to determine whether additional monitoring and/or any corrective action is needed. The State cannot approve an employee of the system to perform this site visit, even if the employee is an agent approved by the State to perform sanitary surveys.	40 CFR 141.855(f)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may waive the requirement to collect three routine samples the next month in which the system provides water to the public if the State has determined why the sample was total coliform-positive and has established that the system has corrected the problem or will correct the problem before the end of the next month in which the system serves water to the public. In this case, the State must document this decision to waive the following month's additional monitoring requirement in writing, have it approved and signed by the supervisor of the State official who recommends such a decision, and make this document available to the EPA and the public. The written documentation must describe the specific cause of the total coliform- positive sample and what action the system has taken and/or will take to correct this problem.	40 CFR 141.855(f)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

The State may not waive the requirement to collect three additional routine samples the next month in which the system provides water to the public solely on the grounds that all repeat samples are total coliform-negative. If the State determines that the system has corrected the contamination problem before the system takes the set of repeat samples required in § 141.858, and all repeat samples were total coliform- negative, the State may waive the requirement for additional routine monitoring the next month.	40 CFR 141.855(f)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
40 CFR 141.856 ROUTINE MONITORING REQUIREMENTS FOR SUBPART H PUBLIC WATER SYSTEMS SERVING 1,000 OR FEWER PEOPLE.			
General.	40 CFR 141.856(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The provisions of this section apply to subpart H public water systems of this part serving 1,000 or fewer people.	40 CFR 141.856(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Following any total coliform-positive sample taken under the provisions of this section, systems must comply with the repeat monitoring requirements and *E. coli* analytical requirements in §.141858.	40 CFR 141.856(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Once all monitoring required by this section and § 141.858 for a calendar month has been completed, systems must determine whether any coliform treatment technique triggers specified in § 141.859 have been exceeded. If any trigger has been exceeded, systems must complete assessments as required by § 141.859.	40 CFR 141.856(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Seasonal systems.	40 CFR 141.856(a)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Beginning April 1, 2016, all seasonal systems must demonstrate completion of a State-approved start-up procedure, which may include a requirement for start- up sampling prior to serving water to the public.	40 CFR 141.856(a)(4)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State may exempt any seasonal system 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.	40 CFR 141.856(a)(4)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

Routine monitoring frequency for total coliforms. Subpart H systems of this part (including consecutive systems) must monitor monthly. Systems may not reduce monitoring.	40 CFR 141.856(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Unfiltered subpart H systems. A subpart H system of this part that does not practice filtration in compliance with subparts H, P, T, and W must collect at least one total coliform sample near the first service connection each day the turbidity level of the source water, measured as specified in § 141.74(b)(2), exceeds 1 NTU. When one or more turbidity measurements in any day exceed 1 NTU, the system must collect this coliform sample within 24 hours of the first exceedance, unless the State determines that the system, for logistical reasons outside the system's control, cannot have the sample analyzed within 30 hours of collection and identifies an alternative sample collection schedule. Sample results from this coliform monitoring must be included in determining whether the coliform treatment technique trigger in § 141.859 has been exceeded.	40 CFR 141.856(c)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
40 CFR 141.857 ROUTINE MONITORING REQUIREMENTS FOR PUBLIC WATER SYSTEMS SERVING MORE THAN 1,000 PEOPLE.			
General.	40 CFR 141.857(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The provisions of this section apply to public water systems serving more than 1,000 persons.	40 CFR 141.857(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Following any total coliform-positive sample taken under the provisions of this section, systems must comply with the repeat monitoring requirements and *E. coli* analytical requirements in § 141.858.	40 CFR 141.857(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Once all monitoring required by this section and § 141.858 for a calendar month has been completed, systems must determine whether any coliform treatment technique triggers specified in § 141.859 have been exceeded. If any trigger has been exceeded, systems must complete assessments as required by § 141.859.	40 CFR 141.857(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Seasonal systems.	40 CFR 141.857(a)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Beginning April 1, 2016, all seasonal systems must demonstrate completion of a State-approved start-up procedure, which may include a requirement for start- up sampling prior to serving water to the public.	40 CFR 141.857(a)(4)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

The State may exempt any seasonal system 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.	40 CFR 141.857(a)(4)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Monitoring frequency for total coliforms. The monitoring frequency for total coliforms is based on the population served by the system, as follows:	40 CFR 141.857(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

Total Coliform Monitoring Frequency for Public Water Systems Serving More Than 1,000 People

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

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/ PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Unfiltered subpart H systems. A subpart H system of this part that does not practice filtration in compliance with subparts H, P, T, and W must collect at least one total coliform sample near the first service connection each day the turbidity level of the source water, measured as specified in § 141.74(b)(2), exceeds 1 NTU. When one or more turbidity measurements in any day exceed 1 NTU, the system must collect this coliform sample within 24 hours of the first exceedance, unless the State determines that the system, for logistical reasons outside the system's control, cannot have the sample analyzed within 30 hours of collection and identifies an alternative sample collection schedule. Sample results from this coliform monitoring must be included in determining whether the coliform treatment technique trigger in § 141.859 has been exceeded.	40 CFR 141.857(c)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Reduced monitoring. Systems may not reduce monitoring, except for non-community water systems using only ground water (and not ground water under the direct influence of surface water) serving 1,000 or fewer people in some months and more than 1,000 when more than 1,000 persons are served, the systems must monitor at the frequency specified in paragraph (b)* of this section. In months when 1,000 or fewer people are served, the State may reduce the monitoring frequency, in writing, to a frequency allowed under § 141.854 for a similarly situated system that always serves 1,000 or fewer people, taking into account the provisions in § 141.854(e) through (g). * 40 CFR 141.857(d) incorrectly references paragraph (a). The correct federal cross reference is (b).	40 CFR 141.857(d)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
40 CFR 141.858 REPEAT MONITORING AND E. COLI REQUIREMENTS.			

Repeat monitoring.	40 CFR 141.858(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
If a sample taken under §§ 141.854 through* 141.857 is total coliform-positive, the system must collect a set of repeat samples within 24 hours of being notified of the positive result. The system must collect no fewer than three repeat samples for each total coliform- positive sample found. The State may extend the 24- hour limit on a case-by-case basis if the system has a logistical problem in collecting the repeat samples within 24 hours that is beyond its control. Alternatively, the State may implement criteria for the system to use in lieu of case-by-case extensions. In the case of an extension, the State must specify how much time the system has to collect the repeat samples. The State cannot waive the requirement for a system to collect repeat samples in paragraphs (a)(1) through (a)(3) of this section. * 40 CFR 141.858(a)(1) incorrectly says "though" instead of "through."	40 CFR 141.858(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system must collect all repeat samples on the same day, except that the State may allow a system with a single service connection to collect the required set of repeat samples over a three-day period or to collect a larger volume repeat sample(s) in one or more sample containers of any size, as long as the total volume collected is at least 300 ml.	40 CFR 141.858(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system must collect an additional set of repeat samples in the manner specified in paragraphs (a)(1) through (a)(3) of this section if one or more repeat samples in the current set of repeat samples is total coliform-positive. The system must collect the additional set of repeat samples within 24 hours of being notified of the positive result, unless the State extends the limit as provided in paragraph (a)(1) of this section. The system must continue to collect additional sets of repeat samples until either total coliforms are not detected in one complete set of repeat samples or the system determines that a coliform treatment technique trigger specified in § 141.859(a) has been exceeded as a result of a repeat sample being total coliform-positive and notifies the State. If a trigger identified in § 141.859 is exceeded as a result of a routine sample being total coliform-positive,	40 CFR 141.858(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

systems are required to conduct only one round of repeat monitoring for each total coliform-positive routine sample.			
After a system collects a routine sample and before it learns the results of the analysis of that sample, if it collects another routine sample(s) from within five adjacent service connections of the initial sample, and the initial sample, after analysis, is found to contain total coliforms, then the system may count the subsequent sample(s) as a repeat sample instead of as a routine sample.	40 CFR 141.858(a)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Results of all routine and repeat samples taken under §§ 141.854 through 141.858 not invalidated by the State must be used to determine whether a coliform treatment technique trigger specified in § 141.859 has been exceeded.	40 CFR 141.858(a)(5)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Escherichia coli (E. coli) testing.	40 CFR 141.858(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
If any routine or repeat sample is total coliform- positive, the system must analyze that total coliform- positive culture medium to determine if *E. coli* are present. If *E. coli* are present, the system must notify the State by the end of the day when the system is notified of the test result, unless the system is notified of the result after the State office is closed and the State does not have either an after-hours phone line or an alternative notification procedure, in which case the system must notify the State before the end of the next business day.	40 CFR 141.858(b)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The State has the discretion to allow a system, on a case-by-case basis, to forgo *E. coli* testing on a total coliform-positive sample if that system assumes that the total coliform-positive sample is *E. coli*-positive. Accordingly, the system must notify the State as specified in paragraph (b)(1) of this section and the provisions of § 141.63(c) apply.	40 CFR 141.858(b)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
40 CFR 141.859 COLIFORM TREATMENT TECHNIQUE TRIGGERS AND ASSESSMENT REQUIREMENTS FOR PROTECTION AGAINST POTENTIAL FECAL CONTAMINATION.			
Treatment technique triggers. Systems must conduct assessments in accordance with paragraph (b) of this section after exceeding treatment technique triggers in paragraphs (a)(1) and (a)(2) of this section.	40 CFR 141.859(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

Level 1 treatment technique triggers.	40 CFR 141.859(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
For systems taking 40 or more samples per month, the system exceeds 5.0% total coliform-positive samples for the month.	40 CFR 141.859(a)(1)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
For systems taking fewer than 40 samples per month, the system has two or more total coliform-positive samples in the same month.	40 CFR 141.859(a)(1)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system fails to take every required repeat sample after any single total coliform-positive sample.	40 CFR 141.859(a)(1)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Level 2 treatment technique triggers.	40 CFR 141.859(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
An *E. coli* MCL violation, as specified in § 141.860(a).	40 CFR 141.859(a)(2)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A second Level 1 trigger as defined in paragraph (a)(1) of this section, within a rolling 12-month period, unless the State has determined a likely reason that the samples that caused the first Level 1 treatment technique trigger were total coliform-positive and has established that the system has corrected the problem.	40 CFR 141.859(a)(2)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
For systems with approved annual monitoring, a Level 1 trigger in two consecutive years.	40 CFR 141.859(a)(2)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Requirements for assessments.	40 CFR 141.859(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Systems must ensure that Level 1 and 2 assessments are conducted in order to identify the possible presence of sanitary defects and defects in distribution system coliform monitoring practices. Level 2 assessments must be conducted by parties approved by the State.	40 CFR 141.859(b)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

When conducting assessments, systems must ensure that the assessor evaluates minimum elements that include review and identification of inadequacies in sample sites; sampling protocol; sample processing; atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., small ground water systems); and existing water quality monitoring data. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.	40 CFR 141.859(b)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Level 1 Assessments. A system must conduct a Level 1 assessment consistent with State requirements if the system exceeds one of the treatment technique triggers in paragraph (a)(1) of this section.	40 CFR 141.859(b)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system must complete a Level 1 assessment as soon as practical after any trigger in paragraph (a)(1) of this section. In the completed assessment form, the system must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment form may also note that no sanitary defects were identified. The system must submit the completed Level 1 assessment form to the State within 30 days after the system learns that it has exceeded a trigger.	40 CFR 141.859(b)(3)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
If the State reviews the completed Level 1 assessment and determines that the assessment is not sufficient (including any proposed timetable for any corrective actions not already completed), the State must consult with the system. If the State requires revisions after consultation, the system must submit a revised assessment form to the State on an agreed-upon schedule not to exceed 30 days from the date of the consultation.	40 CFR 141.859(b)(3)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Upon completion and submission of the assessment form by the system, the State must determine if the system has identified a likely cause for the Level 1 trigger and, if so, establish that the system has corrected the problem, or has included a schedule acceptable to the State for correcting the problem.	40 CFR 141.859(b)(3)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

Level 2 Assessments. A system must ensure that a Level 2 assessment consistent with State requirements is conducted if the system exceeds one of the treatment technique triggers in paragraph (a)(2) of this section. The system must comply with any expedited actions or additional actions required by the State in the case of an *E. coli* MCL violation.	40 CFR 141.859(b)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system must ensure that a Level 2 assessment is completed by the State or by a party approved by the State as soon as practical after any trigger in paragraph (a)(2) of this section. The system must submit a completed Level 2 assessment form to the State within 30 days after the system learns that it has exceeded a trigger. The assessment form must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment form may also note that no sanitary defects were identified.	40 CFR 141.859(b)(4)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system may conduct Level 2 assessments if the system has staff or management with the certification or qualifications specified by the State unless otherwise directed by the State.	40 CFR 141.859(b)(4)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
If the State reviews the completed Level 2 assessment and determines that the assessment is not sufficient (including any proposed timetable for any corrective actions not already completed), the State must consult with the system. If the State requires revisions after consultation, the system must submit a revised assessment form to the State on an agreed-upon schedule not to exceed 30 days.	40 CFR 141.859(b)(4)(iii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Upon completion and submission of the assessment form by the system, the State must determine if the system has identified a likely cause for the Level 2 trigger and determine whether the system has corrected the problem, or has included a schedule acceptable to the State for correcting the problem.	40 CFR 141.859(b)(4)(iv)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Corrective Action. Systems must correct sanitary defects found through either Level 1 or 2 assessments conducted under paragraph (b) of this section. For corrections not completed by the time of submission of the assessment form, the system must complete the corrective action(s) in compliance with a timetable approved by the State in consultation with the system. The system must notify the State when each scheduled corrective action is completed.	40 CFR 141.859(c)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

Consultation. At any time during the assessment or corrective action phase, either the water system or the State may request a consultation with the other party to determine the appropriate actions to be taken. The system may consult with the State on all relevant information that may impact on its ability to comply with a requirement of this subpart, including the method of accomplishment, an appropriate timeframe, and other relevant information.	40 CFR 141.859(d)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
40 CFR 141.860 VIOLATIONS.			
E. coli MCL Violation. A system is in violation of the MCL for *E. coli* when any of the conditions identified in paragraphs (a)(1) through (a)(4) of this section occur.	40 CFR 141.860(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has an *E. coli*-positive repeat sample following a total coliform-positive routine sample.	40 CFR 141.860(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system has a total coliform-positive repeat sample following an *E. coli*-positive routine sample.	40 CFR 141.860(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system fails to take all required repeat samples following an *E. coli*-positive routine sample.	40 CFR 141.860(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system fails to test for *E. coli* when any repeat sample tests positive for total coliform.	40 CFR 141.860(a)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Treatment technique violation.	40 CFR 141.860(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A treatment technique violation occurs when a system exceeds a treatment technique trigger specified in § 141.859(a) and then fails to conduct the required assessment or corrective actions within the timeframe specified in § 141.859(b) and (c).	40 CFR 141.860(b)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A treatment technique violation occurs when a seasonal system fails to complete a State-approved start-up procedure prior to serving water to the public.	40 CFR 141.860(b)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

Monitoring violations.	40 CFR 141.860(c)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Failure to take every required routine or additional routine sample in a compliance period is a monitoring violation.	40 CFR 141.860(c)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Failure to analyze for *E. coli* following a total coliform-positive routine sample is a monitoring violation.	40 CFR 141.860(c)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Reporting violations.	40 CFR 141.860(d)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Failure to submit a monitoring report or completed assessment form after a system properly conducts monitoring or assessment in a timely manner is a reporting violation.	40 CFR 141.860(d)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Failure to notify the State following an *E. coli*-positive sample as required by § 141.858(b)(1) in a timely manner is a reporting violation.	40 CFR 141.860(d)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Failure to submit certification of completion of State- approved start-up procedure by a seasonal system is a reporting violation.	40 CFR 141.860(d)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
40 CFR 141.861 REPORTING AND RECORDKEEPING.			
Reporting.	40 CFR 141.861(a)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
E. coli.	40 CFR 141.861(a)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A system must notify the State by the end of the day when the system learns of an *E. coli* MCL violation, unless the system learns of the violation after the State office is closed and the State does not have either an after-hours phone line or an alternative notification procedure, in which case the system must notify the State before the end of the next business day, and notify the public in accordance with subpart Q of this part.	40 CFR 141.861(a)(1)(i)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

A system must notify the State by the end of the day when the system is notified of an *E. coli*-positive routine sample, unless the system is notified of the result after the State office is closed and the State does not have either an after-hours phone line or an alternative notification procedure, in which case the system must notify the State before the end of the next business day.	40 CFR 141.861(a)(1)(ii)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A system that has violated the treatment technique for coliforms in § 141.859 must report the violation to the State no later than the end of the next business day after it learns of the violation, and notify the public in accordance with subpart Q of this part.	40 CFR 141.861(a)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A system required to conduct an assessment under the provisions of § 141.859 of this part must submit the assessment report within 30 days. The system must notify the State in accordance with § 141.859(c) when each scheduled corrective action is completed for corrections not completed by the time of submission of the assessment form.	40 CFR 141.861(a)(3)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A system that has failed to comply with a coliform monitoring requirement must report the monitoring violation to the State within 10 days after the system discovers the violation, and notify the public in accordance with subpart Q of this part.	40 CFR 141.861(a)(4)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
A seasonal system must certify, prior to serving water to the public that it has complied with the State- approved start-up procedure.	40 CFR 141.861(a)(5)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
Recordkeeping.	40 CFR 141.861(b)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.
The system must maintain any assessment form, regardless of who conducts the assessment, and documentation of corrective actions completed as a result of those assessments, or other available summary documentation of the sanitary defects and corrective actions taken under § 141.859 for State review. This record must be maintained by the system for a period not less than five years after completion of the assessment or corrective action.	40 CFR 141.861(b)(1)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

The system must maintain a record of any repeat sample taken that meets State criteria for an extension of the 24-hour period for collecting repeat samples as provided for under § 141.858(a)(1) of this part.	40 CFR 141.861(b)(2)	R18-4-126(A)	Federal rule text incorporated by reference in R18-4-126.

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	EXPLANATION OF STATE POLICIES AND PROCEDURES
Part 142--National Primary Drinking Water Regulations Implementation		
SUBPART B – PRIMARY ENFORCEMENT RESPONSIBILITY		
40 CFR 142.14 RECORDS KEPT BY STATES.		
The analytical results, set forth in a form that makes possible comparison with the limits specified in §§ 141.63, 141.71, and 141.72 of this chapter and with the limits specified in subpart Y of this chapter.	40 CFR 142.14(a)(1)(iii)	ADEQ maintains these records in a physical file for each public water system in the state, called a "facility file". Per the ADEQ records retention policy (see Appendix C) microbiological analytical files have a retention time of “after calendar year prepared.” ADEQ also maintains a comprehensive statewide database (SDWIS) containing all relevant information on public water systems, including certified operator, owner information, water source, population, schedule for conducting monitoring, and results from analytical tests. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14.
Records of each of the following decisions made pursuant to the provisions of subpart Y of part 141 must be made in writing and retained by the State.	40 CFR 142.14(a)(10)	ADEQ makes records of decision on a system-by-system and case-by-case basis in writing and maintains these records in the facility file of the public water system. An appropriate summary of the record of decision is entered into SDWIS. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14(see Appendix C for record retention policy).
Records of the following decisions or activities must be retained for five years.	40 CFR 142.14(a)(10)(i)	Same as above

Sections 141.858(a), 141.853(c)(2), 141.856(c), and 141.857(c) of this chapter— Any case-by-case decision to waive the 24-hour time limit for collecting repeat samples after a total coliform-positive routine sample, or to extend the 24-hour limit for collection of samples following invalidation, or for an unfiltered subpart H system of this part to collect a total coliform sample following a turbidity measurement exceeding 1 NTU.	40 CFR 142.14(a)(10)(i)(A)	Same as above
Sections 141.854(j) and 141.855(f) of this chapter—Any decision to allow a system to waive the requirement for three routine samples the month following a total coliform-positive sample. The record of the waiver decision must contain all the items listed in those sections.	40 CFR 142.14(a)(10)(i)(B)	Same as above
Section 141.853(c) of this chapter—Any decision to invalidate a total coliform- positive sample. If the decision to invalidate a total coliform-positive sample as provided in § 141.853(c)(1) of this chapter is made, the record of the decision must contain all the items listed in that section.	40 CFR 142.14(a)(10)(i)(C)	Same as above
Section 141.859 of this chapter—Completed and approved subpart Y assessments, including reports from the system that corrective action has been completed as required by § 141.861(a)(2) of this chapter.	40 CFR 142.14(a)(10)(i)(D)	ADEQ's standard procedure is to review assessments and corrective actions and enter an appropriate summary of the record into SDWIS. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14.
Records of each of the following decisions must be retained in such a manner so that each system's current status may be determined:	40 CFR 142.14(a)(10)(ii)	ADEQ's standard procedure is to send the original of a record of decision to the public water system, and a copy of the decision is maintained in the facility file. An appropriate summary of the record of decision is entered into SDWIS. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14(see Appendix C for record retention policy).
Section 141.854(e) of this chapter—Any decision to reduce the total coliform monitoring frequency for a non-community water system using only groundwater and serving 1,000 or fewer people to less than once per	40 CFR 142.14(a)(10)(ii)(A)	ADEQ's standard procedure is to send the original of a record of decision to the public water system, and a copy of the decision is

quarter, as provided in § 141.854(e) of this chapter, including what the reduced monitoring frequency is. A copy of the reduced monitoring frequency must be provided to the system.		maintained in the facility file. An appropriate summary of the record of decision is entered into SDWIS. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14 (see Appendix C for record retention policy)
Section 141.855(d) of this chapter—Any decision to reduce the total coliform monitoring frequency for a community water system serving 1,000 or fewer people to less than once per month, as provided in § 141.855(d) of this chapter, including what the reduced monitoring frequency is. A copy of the reduced monitoring frequency must be provided to the system.	40 CFR 142.14(a)(10)(ii)(B)	Same as above
Section 141.857(d) of this chapter—Any decision to reduce the total coliform monitoring frequency for a non-community water system using only groundwater and serving more than 1,000 persons during any month the system serves 1,000 or fewer people, as provided in § 141.857(d) of this chapter. A copy of the reduced monitoring frequency must be provided to the system.	40 CFR 142.14(a)(10)(ii)(C)	Same as above
Section 141.858(b)(2) of this chapter—Any decision to allow a system to forgo *E. coli* testing of a total coliform-positive sample if that system assumes that the total coliform-positive sample is *E. coli*-positive.	40 CFR 142.14(a)(10)(ii)(D)	ADEQ makes records of decision on a system-by-system and case-by-case basis in writing and maintains these records in the facility file of the public water system. An appropriate summary of the record of decision is entered into SDWIS. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14 (see Appendix C for record retention policy).
40 CFR 142.15 REPORTS BY STATES.		
Total coliforms under subpart Y. A list of systems that the State is allowing to monitor less frequently than once per month for community water systems or less frequently than once per quarter for non-community water systems as provided in §§ 141.855 and 141.854 of this chapter, including	40 CFR 142.15(c)(3)	ADEQ will make approvals or denials in writing and file in the Facility File. If approved the monitoring schedule will be reflected in SDWIS

the applicable date of the reduced monitoring requirement for each system.		as less than Monthly with the applicable date of reduced requirement.
40 CFR 142.16 SPECIAL PRIMACY REQUIREMENTS.		
Requirements for States to adopt 40 CFR part 141 subpart Y – Revised Total Coliform Rule. In addition to the general primacy requirements elsewhere in this part, including the requirements that State regulations be at least as stringent as federal requirements, an application for approval of a State program revision that adopts 40 CFR part 141, subpart Y, must contain the information specified in this paragraph (q).	40 CFR 142.16(q)	Subpart Y is incorporated by reference by R18 4 126, Ariz. Admin. Code; Arizona's rule is at least as stringent as the federal rule.
In their application to EPA for approval to implement the federal requirements, the primacy application must indicate what baseline and reduced monitoring provisions of 40 CFR part 141, subpart Y the State will adopt and must describe how they will implement 40 CFR part 141, subpart Y in these areas so that EPA can be assured that implementation plans meet the minimum requirements of the rule.	40 CFR 142.16(q)(1)	Subpart Y is incorporated by reference by R18 4 126, Ariz. Admin. Code; Arizona's rule is at least as stringent as the federal rule. ADEQ has decided to not implement the following sections of Subpart Y which indicate the "State *may* allow": 40 CFR 141.854(a)(4); 141.854(e); and 141.854(j)(1). All other portions of Subpart Y will be implemented.
The State's application for primacy for subpart Y must include a written description for each provision included in paragraphs (q)(2)(i) through (ix) of this section.	40 CFR 142.16(q)(2)	See Below:
Sample Siting Plans—The frequency and process used to review and revise sample siting plans in accordance with 40 CFR part 141, subpart Y to determine adequacy.	40 CFR 142.16(q)(2)(i)	ADEQ will review Sample Siting plans at each Sanitary Survey (performed on a 3 or 5 year cycle) and at each instance of a Total Coliform positive result, if not already approved by the regulatory agency. ADEQ has created a template to explain the criteria needed for each sample plan (see Appendix C) and for the system to use, or use as a guide to ensure all necessary requirements are included. If the plan is not acceptable, ADEQ will work with the system to create an acceptable plan. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14.

Reduced Monitoring Criteria—An indication of whether the State will adopt the reduced monitoring provisions of 40 CFR part 141, subpart Y. If the State adopts the reduced monitoring provisions, it must describe the specific types or categories of water systems that will be covered by reduced monitoring and whether the State will use all or a reduced set of the criteria specified in §§ 141.854(h)(2) and 141.855(d)(1)(iii) of this chapter. For each of the reduced monitoring criterion, the State must describe how the criteria will be evaluated to determine when systems qualify.	40 CFR 142.16(q)(2)(ii)	Subpart Y is incorporated by reference by R18 4 126, Ariz. Admin. Code. The rule states that States *may* allow reduced monitoring for this rule. Arizona has opted to allow reduced quarterly monitoring for Community Water systems serving only groundwater and 1,000 people or less. These systems will be evaluated, and approval determined, based on the requirements listed in 40 CFR §141.855(d)(1). Arizona has opted not to allow annual reduced monitoring for any systems.
Assessments and Corrective Actions—The process for implementing the new assessment and corrective action phase of the rule, including the elements in paragraphs (q)(2)(iii)(A) through (D) of this section.	40 CFR 142.16(q)(2)(iii)	Subpart Y is incorporated by reference by R18 4 126, Ariz. Admin. Code; Arizona's rule is as stringent as the federal rule. Arizona also defines "protected water source" in R18-4-103.
Elements of Level 1 and Level 2 assessments. This must include an explanation of how the State will ensure that Level 2 assessments provide a more detailed examination of the system (including the system's monitoring and operational practices) than do Level 1 assessments through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices.	40 CFR 142.16(q)(2)(iii)(A)	Assessment templates were created by ADEQ and are used in all triggered assessments. Assessment templates guide the person performing the assessment to review common causes of significant deficiencies and provides room for additional observations. See Appendix C for Assessment templates. Templates ensure that Level 2 assessments provide a more detailed examination of the system than do a Level 1, by including additional possible sources of sanitary defects to consider. Level 1 assessments can be performed by any representative of the PWS. Level 2 assessments must be performed by an operator of equal or greater requirement that the system requires and ADEQ strongly recommends it not be the same operator who performed the Level 1 assessment. The record retention times as set out in 40 CFR 142.14 are

		formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14.
Examples of sanitary defects.	40 CFR 142.16(q)(2)(iii)(B)	ADEQ has set forth a checklist of sanitary defects in the assessment templates (see Appendix C), with room for additional sanitary defects if found by the assessment. The assessment templates can be found in Appendix C for reference.
Examples of assessment forms or formats.	40 CFR 142.16(q)(2)(iii)(C)	ADEQ created templates to be used during the assessments, which can be found in Appendix C. Systems will be able to access these templates through the ADEQ website, or contact ADEQ for a copy.
Methods that systems may use to consult with the State on appropriate corrective actions.	40 CFR 142.16(q)(2)(iii)(D)	ADEQ's Compliance Assistance Coordinators (CAC) oversee specific counties within Arizona. Water systems in the specific counties are in regular contact with the designated Compliance Assistance Coordinators. If water systems are unaware of who the designated Compliance Assistance Coordinator is, the contact information is located on ADEQ's website. Systems are encouraged to reach out to their CAC by email or phone. ADEQ staff consult with rule and management and will respond to any consultation request regarding appropriate corrective actions promptly.
Invalidation of routine and repeat samples collected under 40 CFR part 141, subpart Y—The criteria and process for invalidating total coliform and *E. coli*- positive samples under 40 CFR part 141, subpart Y. This description must include criteria to determine if a sample was improperly processed by the laboratory, reflects a domestic or other non-distribution system plumbing problem or reflects circumstances or conditions that do not reflect water quality in the distribution system.	40 CFR 142.16(q)(2)(iv)	Subpart Y is incorporated by reference by R18 4 126, Ariz. Admin. Code; Arizona's rule is as stringent as the federal rule. Invalidations are decided on a case-by-case basis, and rely on the certified laboratory's documentation (141.853 (c)(1)(i)), or documentation, photographic evidence, and analysis results (141.853 (c)(1)(ii) & (iii)), as needed based on the "Data Acceptance Policy" standard work (Appendix C).

		Any approvals will be documented and placed in the facility file. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14.
Approval of individuals allowed to conduct Level 2 assessments under 40 CFR part 141, subpart Y—The criteria and process for approval of individuals allowed to conduct Level 2 assessments under 40 CFR part 141, subpart Y.	40 CFR 142.16(q)(2)(v)	Level 2 Assessment can be performed by a representative of the Department, a professional engineer or sanitarian who is registered in Arizona, a certified water system operator that has the level of certification required for the system or higher, or another person approved by the Department. Under A.R.S. § 49-352(A) ADEQ must certify any operators for public water systems according to level of skill, knowledge and experience. ADEQ's rules in Title 18, Chapter 5, Article 1, Ariz. Admin. Code, regulate operators of public drinking water and wastewater systems. Certified operators must have 30 professional development hours during a three-year period to maintain their certificates.
Special monitoring evaluation—The procedure for performing special monitoring evaluations during sanitary surveys for ground water systems serving 1,000 or fewer people to determine whether systems are on an appropriate monitoring schedule.	40 CFR 142.16(q)(2)(vi)	Subpart Y is incorporated by reference by R18 4 126, Ariz. Admin. Code; Arizona's rule is at least as stringent as the federal rule.
Seasonal systems—How the State will identify seasonal systems, how the State will determine when systems on less than monthly monitoring must monitor, and what start-up provisions seasonal system must meet under 40 CFR part 141, subpart Y.	40 CFR 142.16(q)(2)(vii)	Subpart Y is incorporated by reference by R18 4 126, Ariz. Admin. Code; Arizona's rule is as stringent as the federal rule. Seasonal Startup Certifications or Waivers are documented in SDWIS and filed in the system's facility file.
Additional criteria for reduced monitoring—How the State will require systems on reduced monitoring to demonstrate:	40 CFR 142.16(q)(2)(viii)	See below:

Continuous disinfection entering the distribution system and a residual in the distribution system.	40 CFR 142.16(q)(2)(viii)(A)	Residuals in Distribution system will have Facility Analyte Level (FANL) schedules built in SDWIS and system will be required to submit results of the residual levels. This process will be similar to the installation of 4-LOG disinfection (99.99% inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal)) which requires ADEQ approval to construct (ATC) and approval of construction (AOC) permits kept on file at ADEQ and the system. 4 –LOG disinfection logs, analyses, and documentation are kept on file at system, ADEQ will review these results during sanitary survey. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14 (see Appendix C for record retention policy).
Cross connection control.	40 CFR 142.16(q)(2)(viii)(B)	Cross connection control is already required under A.A.C. R18-4-215 (Backflow Prevention). ADEQ reviews cross connection control during the sanitary survey.
Other enhancements to water system barriers.	40 CFR 142.16(q)(2)(viii)(C)	ADEQ requires ATC and AOC, approvals on file at ADEQ and the system. ADEQ will review at each sanitary survey. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14.
Criteria for extending the 24-hour period for collecting repeat samples.—Under §§ 141.858(a) and 141.853(c)(2) of this chapter, criteria for systems to use in lieu of case-by-case decisions to waive the 24-hour time limit for collecting repeat samples after a total coliform-positive routine sample, or to extend the 24-hour limit for collection of samples following invalidation. If the State elects to use only case-by-case waivers, the State does not need	40 CFR 142.16(q)(2)(ix)	This decision to allow an extension of the 24-hour limit, or waive the 24-hour limit, for collection of samples following invalidation will focus on the consideration of un-due hardship to the system, as well as the health and safety of the sampler. ADEQ makes records of decision on a system-by-system and case-by-case basis in

to develop and submit criteria.		writing and maintains these records in the facility file of the public water system. An appropriate summary of the record of decision is entered into SDWIS. The record retention times as set out in 40 CFR 142.14 are formalized in a schedule, as required under Arizona's public records laws, specifically A.R.S. § 41-151.14.
SUBPART G – IDENTIFICATION OF BEST TECHNOLOGY, TREATMENT TECHNIQUES OR OTHER MEANS GENERALLY AVAILABLE		
40 CFR 142.63 VARIANCES AND EXEMPTIONS FROM THE MAXIMUM CONTAMINANT LEVEL FOR TOTAL COLIFORMS.		
EPA has stayed this section as it relates to the total coliform MCL of § 141.63(a) of this chapter for systems that demonstrate to the State that the violation of the total coliform MCL is due to a persistent growth of total coliforms in the distribution system rather than fecal or pathogenic contamination, a treatment lapse or deficiency, or a problem in the operation or maintenance of the distribution system. This stay is applicable until March 31, 2016, at which time the total coliform MCL is no longer applicable.	40 CFR 142.63(b)	N/A

3.1 Difference between State and Federal

Arizona Department of Environmental Quality has incorporated the Revised Total Coliform Rule by reference as of April 2, 2016. The rule and regulations have been incorporated to be no less stringent that the federal requirements. All rule and regulations are the same, with the few exceptions identified in this section.

In regards to consecutive and wholesale systems as it applies to the Revised Total Coliform Rule, the federal text has been modified as follows: (i) In addition to the other requirements of this paragraph (a), a consecutive ground water system that has a total coliform-positive sample, collected under § 141.21(a) until March 31, 2016 or under §§ 141.854 through 141.857 beginning April 1, 2016, within 24 hours of being notified of the total coliform-positive sample must: (A) Notify the wholesale system(s) and, (B) Collect a sample from its consecutive connection with the wholesale ground water system and analyze it for a fecal indicator under paragraph (c) of this section. (ii) If the sample collected under paragraph (a)(4)(i)(B) of this section is fecal indicator-positive, within 24 hours: (A) The consecutive system must notify the wholesale ground water system, and (B) Both systems must consult with the Department on additional sampling to meet the requirements of paragraph (a)(3) of this section.
The Arizona Department of Environmental Quality is not seeking primacy for Subpart X – Aircraft Drinking Water Rule, and therefore has not incorporated this section by reference.
All analytical methods and laboratory certifications under this rule are regulated and incorporated by the Arizona Department of Health Services (ADHS), and are specified in R9-14-610. Additionally, the federal analytical methods are incorporated by ADHS.
In regards to the sections which reference Cross connection control and Operator certification are already required under other regulations and therefore are not used as “additional” enhancements to qualify for reduced monitoring under the Revised Total Coliform Rule.

Additionally, there are some sections and portions of the rule that says what the State *may* do, which Arizona/ADEQ has opted to not allow. These include reducing the monitoring frequency for a well-operated ground water system from quarterly routine monitoring to no less than annual monitoring (§141.854(e)); waiving the requirement to collect three routine samples in the month after a routine/reduced quarterly Total Coliform positive sample result if the State , or an agent approved by the State, performs a site visit before the end of the next month that the system serves water (§141.854(j) & 141.855(f)); and allowing a Transient system to avoid a missed monitoring violation if the missed sample is taken in the following quarter, in addition to the following quarter’s sample (§141.854(a)(4)).

Lastly, Arizona Department of Health Services incorporate Standard *Methods for the Examination of Water and Wastewater* 22nd edition (2012) for analytical methods SM9221 and SM9222, rather than the 20th or 21st editions.

Appendix A:

Relevant Arizona Rules

Appendix B:

Relevant Arizona Statutes

Appendix C:

Other Documentation

- ADEQ Microbiological Sample Siting Plan Templates
- ADEQ Revised Total Coliform Rule Assessment templates
- ADEQ Revised Total Coliform Rule Seasonal Start up forms
- ADEQ Water Quality Records Retention Schedule