



COLORADO

Water Quality
Control Commission

Department of Public Health & Environment

NOTICE OF PUBLIC RULEMAKING HEARING BEFORE THE COLORADO WATER QUALITY CONTROL COMMISSION

SUBJECT:

For consideration of the adoption of revisions to the Colorado Primary Drinking Regulations, Regulation #11 (5 CCR 1002-11). Revisions proposed by the Water Quality Control Division, along with a proposed Statement of Basis, Specific Statutory Authority and Purpose, are attached to this notice as Exhibit 1.

In these attachments, proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts~~. Any alternative proposals related to the subject of this hearing will also be considered.

SCHEDULE OF IMPORTANT DATES

Proponent's prehearing statement due	5/13/2020 5 pm	Additional information below.
Party status requests due	5/20/2020 5 pm	Additional information below.
Responsive prehearing statements due	6/17/2020 5 pm	Additional information below.
Rebuttal statements due	7/15/2020 5 pm	Additional information below.
Last date for submittal of motions	7/17/2020 5 pm	Additional information below.
Notify commission office if participating in prehearing conference by phone	7/20/2020 by noon	Send email to cdphe.wgcc@state.co.us with participant(s) name(s)
Prehearing Conference (mandatory for parties)	7/21/2020 2:00 pm	Conference Room: C1B Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246 Google Hangout: 1 716-235-1948 PIN: 973 221 443#
Rulemaking Hearing	8/10/2020 3:30 pm	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246

HEARING SUBMITTALS:

For this hearing, the commission will receive all submittals electronically. Submittals must be provided as PDF documents, except for raw data exhibits which may be provided as Excel workbooks. Submittals may be emailed to cdphe.wqcc@state.co.us, provided via an FTP site, CD or flash drive, or otherwise conveyed to the commission office so as to be received no later than the specified date.

PARTY STATUS:

Party status requests must be in writing and provide:

- the organization's name,
- one contact person,
- a mailing address,
- a phone number, and
- email addresses of all individuals associated with the party who wish to be notified when new submittals are available on the commission's website for review.

In accordance with section 25-8-104(2)(d), C.R.S., any person who believes that the actions proposed in this notice have the potential to cause material injury to his or her water rights is requested to so indicate, along with an explanation of the alleged harm, in their party status request.

PREHEARING AND REBUTTAL STATEMENTS:

Each party must submit a prehearing statement: parties that have proposed revisions attached as exhibits to the notice must submit a proponent's prehearing statement. All other parties must submit a responsive prehearing statement. Proponents may also submit responsive prehearing statements when there are multiple proposals attached to the notice.

Each prehearing and rebuttal statement must be provided as a separate PDF document from any accompanying written testimony or exhibits.

Following the rebuttal statement due date, no other written materials will be accepted from parties except for good cause shown.

Oral testimony at the hearing should primarily summarize written material previously submitted. The hearing will emphasize commission questioning of parties and other interested persons about their written prehearing submittals. Introduction of written material at the hearing by those with party status will not be permitted unless authorized by the commission.

PREHEARING CONFERENCE:

Attendance at the prehearing conference is mandatory for all persons requesting party status. Parties needing to participate by telephone are encouraged to notify the commission office prior to the prehearing conference. Remote participants can call the number in the table above and enter the PIN to access the Google Hangout.

Following the cut-off date for motions, no motions will be accepted, except for good cause shown.

PUBLIC PARTICIPATION ENCOURAGED:

The commission encourages input from non-parties, either orally at the hearing or in writing prior to the hearing. Written submissions should be emailed to cdphe.wqcc@state.co.us by July 29, 2020.

SPECIFIC STATUTORY AUTHORITY:

The provisions of sections 24-4-104, 24-4-105, 25-1.5-101, 25-1.5 Part 2, 25-1-109, 25-1-114, 25-1-114.1, and 25-8-202, C.R.S., provide the specific statutory authority for consideration of the regulatory amendments proposed by this notice. Should the commission adopt the regulatory language as proposed in this notice or alternative amendments, it will also adopt, in compliance with section 24-4-103(4) C.R.S., an appropriate Statement of Basis, Specific Statutory Authority, and Purpose.

Dated this 14th day of April, 2020 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION



Trisha Oeth, Administrator

Exhibit 1

Water Quality Control Division

Regulation #11

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 11 - COLORADO PRIMARY DRINKING WATER REGULATIONS

5 CCR 1002-11

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

11.1 AUTHORITY AND PURPOSE

11.1(1) Authority

The Water Quality Control Commission has promulgated the *Colorado Primary Drinking Water Regulations* pursuant to sections 24-4-104, 24-4-105, 25-1.5-101, 25-1.5 Part 2, 25-1-109, 25-1-114, 25-1-114.1, and 25-8-202, Colorado Revised Statutes.

11.28 STORAGE TANK RULE

11.28(1) Applicability and Definitions

- (a) All public water systems that use finished water storage tanks must comply with the requirements specified in this rule..
- (b) "COMPREHENSIVE INSPECTION" means an internal and external storage tank inspection to identify sanitary defects that covers all aspects of the condition of the storage tank including but not limited to sanitary, structural, and coating systems conditions, as well as security and safety concerns.
- (c) "FINISHED WATER STORAGE TANK" means a tank or vessel owned by the supplier that is located downstream of the entry point and is not pressurized at the air water interface. Pressurized storage tanks are not included in the definition of finished water storage tanks.
- (d) "PERIODIC INSPECTION" means a visual external storage tank inspection that is typically performed by the supplier to identify evident sanitary defects (e.g., lack of screens on vents).

11.28(2) Written Plan for Finished Water Storage Tank Inspections Requirements

- (a) The supplier must develop and maintain a written plan for finished water storage tank inspections which must include all of the following:
 - (i) An inventory of finished water storage tank(s) including all of the following information for each finished water storage tank:
 - (A) Tank type and construction materials (e.g., elevated, buried, etc.).
 - (B) Volume in gallons.
 - (C) Approximate dimensions.

- (D) Location.
- (E) Number of inlets, outlets, overflows, hatches, and vents.
- (F) Coating systems.
- (G) Date put in service.
- (H) Rehabilitation and major maintenance history.
- (ii) The methods for performing and documenting periodic and comprehensive inspections for each finished water storage tank including identification of qualified personnel to perform periodic and comprehensive inspections.
- (iii) The schedule for performing periodic and comprehensive inspections for each finished water storage tank. The supplier may conduct inspections more frequently than the minimum requirements listed below.
 - (A) Periodic inspections of each finished water storage tank must be scheduled and performed at least twice per calendar year at least quarterly or on an alternative schedule.
 - I. For systems operating year-round, there must be at least 90 days between the first and last inspection within a calendar year.
 - II. For seasonal systems, a periodic inspection must be completed during Department-approved start-up procedures as specified in 11.16(6)(a) and at least once while serving water to the public. There must be at least 30 days between the first inspection at start-up and the last periodic inspection within a calendar year.
 - (B) Comprehensive inspections of each finished water storage tank must be scheduled and performed at least every five calendar years or on an alternative schedule.
 - (C) If the supplier schedules periodic or comprehensive inspections on an alternative schedule, the supplier must provide justification for the alternative schedule in the written plan for finished water storage tank inspections. The justification for the alternative schedule must be acceptable to the Department.
- (iv) The timelines for correcting typical storage tank sanitary defects that the supplier will use to develop corrective action schedules. The supplier must at least address timelines for the following typical sanitary defects: improper screening or protection on vents and overflows, inadequate hatches, and unprotected openings.
- (b) The written plan for finished water storage tank inspections is subject to Department review and revision.

11.28(3) Treatment Technique Requirements for Storage Tanks

- (a) The supplier is prohibited from using uncovered finished water storage tanks.
 - (i) "UNCOVERED FINISHED WATER STORAGE TANK" means a tank, reservoir, or other facility used to store water that will undergo no further treatment except residual disinfection and that is open to the atmosphere.

- (b) The supplier must operate and maintain finished water storage tanks so that they are free of sanitary defects.
- (c) The supplier must perform periodic ~~and comprehensive~~ inspections of each finished water storage tank.

~~(d) The supplier must perform comprehensive inspections of each finished water storage tank. If a third party (e.g. diving company) performs a storage tank inspection, the supplier must interpret the inspection observations and properly identify sanitary defects.~~

~~(ed)~~ The supplier must implement the written plan for finished water storage tank inspections.

~~(fe)~~ If any sanitary defects are identified during a periodic or comprehensive inspection, the supplier must develop and implement a corrective action schedule for correcting each sanitary defect.

~~(gf)~~ The supplier must develop an inspection summary no later than 60 days after each completed inspection that includes all of the following information:

- (i) The date and type of inspection performed.
- (ii) Inspection findings and tank conditions.
- (iii) Any sanitary defects identified during the inspection.
- (iv) If sanitary defects are identified, the corrective action schedule for correcting sanitary defects.
- (v) If sanitary defects are identified, the corrective actions completed and the associated completion dates.

11.28(4) Violations of the Storage Tank Rule

(a) If the supplier fails to develop or maintain an acceptable written plan for finished water storage tank inspections, a storage tank rule violation occurs.

(b) The following constitute treatment technique violations:

- (i) The supplier uses an uncovered finished water storage tank.
- (ii) The supplier fails to perform or document the minimum number of a-periodic or comprehensive inspections.

~~(iii) The supplier fails to perform or document a comprehensive inspection.~~

~~(iv###)~~ The supplier fails to implement the written plan for finished water storage tank inspections.

~~(iv)~~ The supplier fails to complete or document corrective action or follow a corrective action schedule for any sanitary defects identified during a periodic or comprehensive inspection.

11.28(5) Response to Violations of the Storage Tank Rule

- (a) In the event of a storage tank rule violation, the supplier must:
 - (i) Notify the department no later than 48 hours after the violation occurs.
 - (ii) Distribute Tier 3 public notice as specified in 11.33.
- (b) In the event of a treatment technique violation, the supplier must:
 - (i) Notify the Department no later than 48 hours after the violation occurs.
 - (ii) Distribute Tier 2 public notice as specified in 11.33.

11.33 PUBLIC NOTIFICATION RULE

11.33(7) Public Notice Reporting Requirements

No later than 10 calendar days after completing initial or repeat public notice requirements, the supplier must submit a certification that states that the supplier has fully complied with the public notice requirements.

- (a) The supplier must include a representative copy of each public notice distributed, published, posted, and/or made available to consumers and the media.

TABLE 11.33-VI TABLE OF STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION

Contaminant	MCLG mg/L	MCL mg/L	Standard health effects language for public notification
Other Treatment Techniques			
Acrylamide	Zero	TT	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Epichlorohydrin	Zero	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
Backflow Prevention and Cross-Connection Control Rule	None	TT	<p><u>Uncontrolled cross connections can lead to contamination of the drinking water creating a health risk to consumers. This can happen if a back pressure or siphonage reverses the flow of water, fluid or gas into the drinking water pipes. We are required to have methods/devices to protect our drinking water from backflows, but we failed to perform one or more of the requirements so we cannot be sure that the drinking water is/was protected. Inadequately protected water may contain contaminants or disease-causing organisms that can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.</u></p> <p>Uncontrolled cross-connections can lead to inadvertent contamination of the drinking water. [THE SUPPLIER MUST ALSO INCLUDE THE FOLLOWING APPLICABLE SENTENCES.] We have installed or permitted an uncontrolled cross-connection. We failed to notify the Department of a backflow contamination event. We failed to complete the testing requirements for backflow prevention devices. We failed to comply with the requirements for surveying our system for cross connections.</p>

<p><u>Storage Tank Rule</u></p>	<p><u>None</u></p>	<p><u>II</u></p>	<p><u>Defective storage tanks can lead to contamination of the drinking water creating a health risk to consumers. We are required to maintain our drinking water storage tank(s) sanitary, structural, and coating systems, as well as maintain security and safety, but we failed to perform one or more of the requirements so we cannot be sure that the drinking water is/was protected. Inadequately protected water may contain contaminants or disease-causing organisms that can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.</u></p>
<p><u>Failure to Correct a Significant Deficiency</u></p>		<p><u>II</u></p>	<p><u>The state health department’s inspection determined that our water system has a significant deficiency that may create an unacceptable health risk to consumers. Significant deficiencies include, but are not limited to, defects in design, improper operation, inadequate maintenance, failure of a water source, failure of the water treatment, unprotected storage, or defects in the distribution system. The state health department determined that the deficiency may be causing, or could cause in the future, contamination of the drinking water. We were required to correct the significant deficiency, but we failed to do so by the deadline. Inadequately treated or inadequately protected water may contain contaminants or disease-causing organisms that can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.</u></p>

11.38 SANITARY SURVEY RULE

11.38(1) Applicability and Definitions

- (a) For all public water systems, the supplier must comply with the requirements specified in this rule.
- (b) "SANITARY SURVEY" means an onsite review of a system's adequacy in producing and distributing safe drinking water. The review will include, but is not limited to, all of the following eight components and the related operation and maintenance practices of each:
 - (i) Source.
 - (ii) Treatment.
 - (iii) Distribution system.
 - (iv) Finished water storage.
 - (v) Pumps, pump facilities, and controls.
 - (vi) Monitoring, reporting, and data verification.
 - (vii) System management and operation.
 - (viii) Supplier compliance with all requirements of the *Colorado Primary Drinking Water Regulations*, Regulation 100, Water and Wastewater Facility Operators Certification Requirements, and any other Department-mandated requirements.

11.38(2) Sanitary Survey Requirements

- (a) Sanitary surveys must be performed by the Department or by a Department-approved third party.
- (b) The supplier must ensure that sanitary surveys are performed at the following frequencies:
 - (i) For non-community water systems, at least every five years.
 - (ii) For community water systems, at least every three years.
 - (A) The Department may reduce the frequency of sanitary surveys to no less frequently than every five years if the supplier meets all of the following:
 - (I) Provides 4-log treatment of viruses for all sources.
 - (II) Has an outstanding performance record, as determined by the Department and documented in previous sanitary surveys.
 - (III) Has had no total coliform MCL violations or total coliform monitoring violations since the last sanitary survey.
- (c) At the Department's request, the supplier must provide the Department with any information that will enable the Department or Department-approved third party to conduct a sanitary survey.

11.38(3) Requirements for Corrective Action for Significant Deficiencies (Treatment Technique Requirement)~~Treatment Technique Requirements for Corrective Action for Significant Deficiencies~~ or Violations Identified During a Sanitary Survey

- (a) If a significant deficiency or violation is identified during a sanitary survey, the supplier must implement corrective action as specified in this section, 11.38(3).
 - (i) For groundwater systems with significant deficiencies, the supplier must implement one or more of the following corrective actions:
 - (A) Correct all significant deficiencies.
 - (B) Provide an alternative source of water.
 - (C) Eliminate the source of contamination.
 - (D) Provide treatment that reliably achieves at least 4-log treatment of viruses at the Department-approved location for the groundwater source.
 - (ii) For groundwater systems with significant deficiencies, the Department may specify which corrective action specified in 11.38(3)(a)(i)(A-D) that the supplier must implement.
 - (iii) The supplier must implement corrective action as approved by the Department for:
 - (A) Surface water systems with significant deficiencies; and
 - (B) All systems with violations.
- (b) The Department may specify interim measures, at any time, pending completion of corrective action to protect public health.
- (c) No later than 30 days after receiving written notice of significant deficiencies and/or violations, the supplier must consult with the Department regarding the appropriate corrective action and schedule, unless the Department specifies which corrective action the supplier must implement.
- (d) No later than 45 days after receiving written notice of significant deficiencies and/or violations, the supplier must submit a written corrective action plan to the Department for approval.
 - (i) The corrective action plan must include the actions the supplier will take to address the significant deficiencies and/or violations and a proposed schedule for completing the actions.
- (e) Any changes the supplier makes to a Department-approved corrective action plan and schedule must be approved by the Department.
- (f) No later than 120 days, or earlier if required by the Department, after receiving written notice of significant deficiencies and/or violations the supplier must either:
 - (i) Have completed the Department-approved corrective action plan including any Department-specified interim measures; or
 - (ii) Be in compliance with the Department-approved corrective action plan and schedule including any Department-specified interim measures.

- (g) No later than 30 days after completing any corrective action under 11.38(3), the supplier must notify the Department of the completed corrective action.

11.38(4) Treatment Technique Violation and Response for Corrective Action

- (a) If the supplier fails to comply with the requirements specified in 11.38(3) for a significant deficiency, a corrective action treatment technique violation occurs.
- (b) In the event of a corrective action treatment technique violation, the supplier must:
- (i) Notify the Department no later than 48 hours after the violation occurs.
 - (ii) Distribute Tier 2 public notice as specified in 11.33.

11.38(5) Special Public Notice Requirements

- (a) For non-community groundwater systems, if the supplier fails to complete corrective action for significant deficiencies, under 11.38(3), within one year of receiving written notice of significant deficiency, or earlier if required by the Department, the supplier must distribute special public notice to inform consumers of the uncorrected significant deficiency.
- (i) The special public notice must include all of the following:
 - (A) The nature of the significant deficiency and the date the significant deficiency was identified by the Department.
 - (B) The Department-approved plan and schedule for corrective action, including interim measures, progress to date, and any interim measures completed.
 - (C) For systems supplying a large proportion of non-English speaking consumers, as determined by the Department, the supplier must include one or more of the following:
 - (I) Information in the appropriate language(s) regarding the importance of the special public notice.
 - (II) A telephone number or address where the consumer may contact the supplier to obtain a translated copy of the special public notice or request assistance in the appropriate language.
 - (ii) The supplier must redistribute the special public notice annually until the significant deficiency is corrected.
- (b) For non-community water systems with significant deficiencies that have been corrected, if required by the Department, the supplier must distribute special public notice to inform consumers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction.

11.39 BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL RULE

11.39(1) Applicability and Definitions

- (a) All public water systems must comply with the requirements specified in this rule.

- (b) “ACTIVE DATE” means the first day that a backflow prevention assembly or backflow prevention method is used to control a cross connection in each calendar year.
- (c) “BACKFLOW” means the reverse flow of water, fluid, or gas caused by back pressure or back siphonage.
- (d) “BACKFLOW PREVENTION ASSEMBLY” means any mechanical assembly installed at a water service line or at a plumbing fixture to prevent a backflow contamination event, provided that the mechanical assembly is appropriate for the identified contaminant at the cross connection and is an in-line field-testable assembly.
- (e) “BACKFLOW PREVENTION ASSEMBLY ANNUAL TESTING COMPLIANCE RATIO” means the number of backflow prevention assemblies tested during the calendar year divided by the number of backflow prevention assemblies installed at a cross connection that were used during the calendar year.
- (f) “BACKFLOW PREVENTION METHOD” means any method and/or non-testable device installed at a water service line or at a plumbing fixture to prevent a backflow contamination event, provided that the method or non-testable device is appropriate for the identified contaminant at the cross connection.
- (g) “BACKFLOW PREVENTION METHOD ANNUAL INSPECTION COMPLIANCE RATIO” means the number of backflow prevention methods inspected during the calendar year divided by the number of backflow prevention methods installed at a cross connection that were used during the calendar year.
- (h) “CERTIFIED CROSS-CONNECTION CONTROL TECHNICIAN” means a person who possesses a valid Backflow Prevention Assembly Tester certification from one of the following approved organizations: American Society of Sanitary Engineering (ASSE) or the American Backflow Prevention Association (ABPA). If a certification has expired, the certification is invalid.
- (i) “CONTROLLED” means having a properly installed, maintained, and tested or inspected backflow prevention assembly or backflow prevention method that prevents backflow through a cross connection.
- (j) “SINGLE-FAMILY-RESIDENTIAL” means:
 - (i) A single living unit that is supplied by its own separate service line; or
 - (ii) Multiple living units where each individual living unit is supplied by a separate service line; or
 - (iii) Two separate single living units supplied by a common service line.
- (k) “SURVEY COMPLIANCE RATIO” means the total number of connections surveyed, including the number of all non-single-family-residential connections to the public water system with the most protective backflow prevention assembly or method that was not surveyed as specified in 11.39(3)(c), divided by the total number of non-single-family-residential connections to the public water system and connections within the supplier’s waterworks.
 - (i) The supplier is not required to include any non-single-family-residential connections identified after October 31 of the calendar year in the total number of non-single-family-residential connections to the public water system until the following calendar year.

- (l) "UNCONTROLLED" means not having a properly installed and maintained and tested or inspected backflow prevention assembly or backflow prevention method, or the backflow prevention assembly or backflow prevention method does not prevent backflow through a cross connection.

11.39(2) Backflow Prevention and Cross-Connection Control Program Requirements

- (a) The supplier must develop a written backflow prevention and cross-connection control program. The written backflow prevention and cross-connection control program must include all of the following:
 - (i) The supplier's process for conducting surveys.
 - (ii) The supplier's legal authority to perform a survey of a customer's property to determine whether a cross connection is present unless the supplier controls all non-single-family-residential connections to the public water system with the most protective backflow prevention assembly or backflow prevention method.
 - (iii) The process the supplier will use to select a backflow prevention assembly or backflow prevention method to control a cross connection.
 - (iv) The supplier's legal authority to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods and/or require customers to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods.
 - (v) The process the supplier will use to track the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections.
 - (vi) The process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control Technician.
- (b) The Department may review and revise the written backflow prevention and cross-connection control program.
- (c) The supplier must survey all non-single-family-residential connections to the public water system to determine if the connection is a cross connection unless the supplier controls that connection with the most protective backflow prevention assembly or backflow prevention method. The supplier must survey all connections within the supplier's waterworks to determine if the connection is a cross connection.
 - (i) If the supplier identifies a cross connection during a survey, the supplier must determine the type of backflow prevention assembly or backflow prevention method to control the cross connection.
 - (ii) If the supplier becomes aware of a single-family-residential connection to the public water system that is a cross connection, the supplier must determine the type of backflow prevention assembly or backflow prevention method to control the cross connection.
 - (iii) The supplier must achieve the survey compliance ratios as specified in Table 11.39-I.

TABLE 11.39-I Survey Compliance Ratio	
Compliance Date	Compliance Ratio
By December 31, 2016	Greater than 0.60

<u>By December 31, 2017</u>	<u>Greater than 0.70</u>
<u>By December 31, 2018</u>	<u>Greater than 0.80</u>
<u>By December 31, 2019</u>	<u>Greater than 0.90</u>
<u>By December 31, 2020</u>	<u>Greater than 0.90</u>
<u>By December 31, 20210 and each year after</u>	<u>1.0</u>

(iv) The supplier may apply to the Department for alternative survey compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019 specified in Table 11.39-I.

(A) In the application, the supplier must include all of the following information:

(I) An explanation of why the supplier is unable to comply with the survey compliance ratios specified in Table 11.39-I.

(II) The proposed alternative survey compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019 specified in Table 11.39-I.

(a) The proposed alternative survey compliance ratios must meet the survey compliance ratio of 1.0 by December 31, 2020 within a timeline specified by the department.

(III) A discussion of the supplier's strategy to achieve the proposed alternative survey compliance ratios and the survey compliance ratio of 1.0 within a timeline specified by the department. by December 31, 2020.

~~(B) The Department will only grant alternative compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019.~~

~~(B) If the supplier receives written Department-approval for alternative survey compliance ratios, the supplier must comply with any Department-specified requirements in the approval.~~

11.39(3) Treatment Technique Requirements for the Control of Cross Connections

(a) If the supplier learns of a suspected or confirmed backflow contamination event, the supplier must notify and consult with the Department on any appropriate corrective measures no later than 24 hours after learning of the backflow contamination event.

(b) The supplier is prohibited from installing or permitting any uncontrolled cross connection to the distribution system or within the supplier's waterworks.

~~(c) The supplier must survey all non-single family residential connections to the public water system to determine if the connection is a cross connection unless the supplier controls that connection with the most protective backflow prevention assembly or backflow prevention method. The supplier must survey all connections within the supplier's waterworks to determine if the connection is a cross connection.~~

~~(i) If the supplier identifies a cross connection during a survey, the supplier must determine the type of backflow prevention assembly or backflow prevention method to control the cross connection.~~

- ~~(ii) If the supplier becomes aware of a single family residential connection to the public water system that is a cross connection, the supplier must determine the type of backflow prevention assembly or backflow prevention method to control the cross connection.~~
- ~~(iii) The supplier must achieve the survey compliance ratios as specified in Table 11.39 I.~~

Compliance Date	Compliance Ratio
By December 31, 2016	Greater than 0.60
By December 31, 2017	Greater than 0.70
By December 31, 2018	Greater than 0.80
By December 31, 2019	Greater than 0.90
By December 31, 2020 and each year after	1.0

- ~~(iv) The supplier may apply to the Department for alternative survey compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019 specified in Table 11.39 I.~~
 - ~~(A) In the application, the supplier must include all of the following information:~~
 - ~~(I) An explanation of why the supplier is unable to comply with the survey compliance ratios specified in Table 11.39 I.~~
 - ~~(II) The proposed alternative survey compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019 specified in Table 11.39 I.~~
 - ~~(a) The proposed alternative survey compliance ratios must meet the survey compliance ratio of 1.0 by December 31, 2020.~~
 - ~~(III) A discussion of the supplier's strategy to achieve the proposed alternative survey compliance ratios and the survey compliance ratio of 1.0 by December 31, 2020.~~
 - ~~(B) The Department will only grant alternative compliance ratios for the compliance dates from December 31, 2016 through December 31, 2019.~~
 - ~~(C) If the supplier receives written Department approval for alternative survey compliance ratios, the supplier must comply with any Department specified requirements in the approval.~~
- (d) If the supplier discovers an uncontrolled cross connection and a suspected or confirmed backflow contamination event has not occurred, the supplier must:
 - (i) No later than 120 days after its discovery, install and maintain or require the customer to install and maintain a backflow prevention assembly or backflow prevention method at the uncontrolled cross connection, suspend service to the customer, or remove the cross connection.
 - (A) If the supplier is unable to meet the 120-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
 - (B) The supplier can either control cross connections discovered within a customer's water system by containment or containment by isolation.

- (I) "CONTAINMENT" means the installation of a backflow prevention assembly or a backflow prevention method at any connection to the public water system that supplies an auxiliary water system, location, facility, or area such that backflow from a cross connection into the public water system is prevented.
- (II) "CONTAINMENT BY ISOLATION" means the installation of backflow prevention assemblies or backflow prevention methods at all cross connections identified within a customer's water system such that backflow from a cross connection into the public water system is prevented.
- (C) The supplier must ensure that all installed backflow prevention assemblies used to control cross connections are tested by a Certified Cross-Connection Control Technician upon installation.
- (D) The supplier must ensure that all installed backflow prevention methods used to control cross connections are inspected by the supplier or a Certified Cross-Connection Control Technician upon installation.
- (e) The supplier must ensure that backflow prevention assemblies used to control cross connections are tested annually by a Certified Cross-Connection Control Technician and maintained. The supplier must achieve the backflow prevention assembly annual testing compliance ratios as specified in Table 11.39-II.

Compliance Date	Annual Compliance Ratio
By December 31, 2016	Greater than 0.50
By December 31, 2017	Greater than 0.60
By December 31, 2018	Greater than 0.70
By December 31, 2019	Greater than 0.80
By December 31, 2020	Greater than 0.80
By December 31, 2021 and each year after	Greater than 0.90

- (i) No later than ~~1260~~ days after the supplier is notified of a failed test, the supplier must ensure that the backflow prevention assembly that produced the failed test is repaired or replaced and tested, service is suspended to the customer, or the cross connection is removed.
 - (A) If the supplier is unable to meet the ~~1260~~-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
- (ii) Beginning January 1, 2024, for each backflow prevention assembly not tested during the previous calendar year, the supplier must ensure the backflow prevention assembly is tested no later than 90 days after the active date of the backflow prevention assembly in the following calendar year.
 - (A) If the supplier is unable to meet the 90-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
- (f) The supplier must ensure that backflow prevention methods used to control cross connections are inspected annually by the supplier or a Certified Cross-Connection Control Technician and

maintained. The supplier must achieve a backflow prevention method annual inspection compliance ratio of greater than (>) 0.90.

- (i) No later than ~~1260~~ days after the supplier is notified of an inadequate backflow prevention method, the supplier must ensure that the inadequate backflow prevention method is repaired or replaced, service is suspended to the customer, or the cross connection is removed.
 - (A) If the supplier is unable to meet the ~~1260~~-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
- (ii) Beginning January 1, 2017, for each backflow prevention method not inspected during the previous calendar year, the supplier must ensure the backflow prevention method is inspected no later than 90 days after the active date of the backflow prevention method in the following calendar year.
 - (A) If the supplier is unable to meet the 90-day deadline, the supplier must consult with the Department and the Department may approve an alternative schedule.
- (g) The supplier must control or remove any uncontrolled cross connection or ensure that any cross connection is controlled no later than 10 days after being ordered in writing by the Department.

11.39(4) Backflow Prevention and Cross-Connection Control Program Annual Written Report

- (a) Beginning in 2017, the supplier must develop a written backflow prevention and cross-connection control program report for the previous calendar year that includes all of the following information:
 - (i) Total number of non-single-family-residential connections to the public water system and connections within the supplier's waterworks.
 - (A) The supplier is not required to include any non-single-family-residential connections identified after October 31 of the calendar year in the total number of non-single-family-residential connections to the public water system until the following calendar year.
 - (ii) Total number of connections surveyed to determine if cross connections are present.
 - (iii) Survey compliance ratio.
 - (iv) Total number of identified cross connections.
 - (v) Number of uncontrolled cross connections identified during the calendar year.
 - (A) Number of identified uncontrolled cross connections that were controlled within 120 days of discovery.
 - (B) Number of identified uncontrolled cross connections that were not controlled within 120 days of discovery.
 - (vi) Number of backflow prevention assemblies installed at cross connections that were used during the calendar year.
 - (vii) Number of backflow prevention methods installed at cross connections that were used during the calendar year.

- (viii) Number of connections where service was suspended as specified in 11.39(3) during the calendar year.
 - (ix) Number of backflow prevention assemblies used to control cross connections that were tested by a Certified Cross Connection Control Technician during the calendar year.
 - (x) Backflow prevention assembly annual testing compliance ratio.
 - (xi) Beginning January 1, 2021, the number and location of backflow prevention assemblies not tested during the calendar year covered by the report.
 - (xii) Number of backflow prevention methods used to control cross connections that were inspected during the calendar year.
 - (xiii) Backflow prevention method annual inspection compliance ratio.
 - (xiv) Beginning January 1, 2017, the number and location of backflow prevention methods not inspected during the calendar year covered by the report.
- (b) For each calendar year, the supplier must complete the annual backflow prevention and cross-connection control program report no later than May 1 of the following calendar year.

11.39(5) Compliance Determinations for Backflow Prevention and Cross-Connection Control

- (a) Compliance with the survey treatment technique requirement is based on the survey compliance ratio.
 - (i) The supplier is not required to include any non-single-family-residential connections identified after October 31 of the calendar year in the total number of non-single-family-residential connections to the public water system until the following calendar year.
- (b) Compliance with the backflow prevention assembly testing treatment technique requirement is based on the backflow prevention assembly annual testing compliance ratio.
- (c) Compliance with the backflow prevention method inspection treatment technique requirement is based on the backflow prevention method annual inspection compliance ratio.

11.39(6) Violations for Backflow Prevention and Cross-Connection Control

- (a) The following constitute backflow prevention and cross-connection control treatment technique violations:
 - (i) The supplier fails to notify the Department of any suspected or confirmed backflow contamination event as specified in 11.39(3)(a).
 - (ii) The supplier installs or permits an uncontrolled cross connection.
 - ~~(iii) The supplier fails to achieve the survey compliance ratio specified in 11.39(3)(c) or the Department approved alternative survey compliance ratios.~~
 - (iii) The supplier discovers an uncontrolled cross connection and fails to comply with the requirements specified in 11.39(3)(d).

- (iv) The supplier fails to achieve the annual backflow prevention assembly testing compliance ratio specified in 11.39(3)(e).
 - (vi) The supplier fails to comply with the backflow prevention assembly failed test requirements specified in 11.39(3)(e)(i).
 - (vii) The supplier fails to comply with the backflow prevention assembly testing requirements specified in 11.39(3)(e)(ii).
 - (viii) The supplier fails to achieve the backflow prevention method inspection compliance ratio specified in 11.39(3)(f).
 - ~~(viii)~~ The supplier fails to comply with the backflow prevention method inadequate method requirements specified in 11.39(3)(f)(i).
 - (ix) The supplier fails to comply with the backflow prevention method inspection requirements specified in 11.39(3)(f)(ii).
 - ~~(xi)~~ The supplier fails to comply with a written order from the Department specified in 11.39(3)(g).
- (b) The following constitute backflow prevention and cross-connection control violations:
- (i) The supplier fails to develop or implement a written backflow prevention and cross-connection control program as specified in 11.39(2).
 - ~~(ii) The supplier fails to achieve the survey compliance ratio specified in 11.39(3)(c) or the Department-approved alternative survey compliance ratios.~~
 - (iii) The supplier fails to complete an annual backflow prevention and cross-connection control program report as specified in 11.39(4).

11.39(7) Response to Violations for Backflow Prevention and Cross-Connection Control

- (a) In the event of a backflow prevention and cross-connection control treatment technique violation, the supplier must:
- (i) Notify the Department no later than 48 hours after the violation occurs.
 - (ii) Distribute Tier 2 public notice as specified in 11.33.
- (b) In the event of a backflow prevention and cross-connection control violation, the supplier must:
- (i) Notify the Department no later than 48 hours after the violation occurs.
 - (ii) Distribute Tier 3 public notice as specified in 11.33.

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 11 - COLORADO PRIMARY DRINKING WATER REGULATIONS

5 CCR 1002-11

11.61 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: October 13, 2020 Decision; Effective Date December 15, 2020

The following sections were affected by this rulemaking hearing: Regulation 11 Table of Contents, 11.28 – Storage Tank Rule, 11.33 – Public Notification Rule, 11.38 – Sanitary Survey Rule, 11.39 – Backflow Prevention and Cross-Connection Control Rule. The provisions of the Colorado Revised Statutes (CRS), section 25-1.5-202, provide specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with section 24-4-103(4), CRS, the following statement of basis and purpose.

BASIS AND PURPOSE

Background

All suppliers of drinking water in Colorado are subject to regulations adopted by the U.S. Environmental Protection Agency (EPA) under the Safe Drinking Water Act, (42 U.S.C. 300f et seq.) as well as regulations adopted by the Water Quality Control Commission. Colorado, with the Colorado Department of Public Health and Environment (the Department) as the administering agency, has been granted primary enforcement responsibility (primacy) for the public water system supervision program under the federal Safe Drinking Water Act. The Water Quality Control Division (Division) is part of the Department and is responsible for implementing and enforcing the drinking water regulations that are adopted by the Commission and applicable regulations adopted by the Board of Health. In order to maintain primacy from the EPA, states must also promulgate new regulations that are no less stringent than those adopted by the federal government. In the 2015 rulemaking when the Commission adopted the Revised Total Coliform Rule, the commission included Colorado-specific requirements for storage tanks, backflow prevention and cross connection control, water haulers, minimum chlorine residual disinfectant concentration in the distribution system, and various other editorial revisions and clarifications. The Commission adopted these revisions primarily to address outstanding waterborne disease outbreak reduction strategies that were developed as a result of the Salmonella outbreak in Alamosa in 2008. As published in the November 2009 report “Waterborne Salmonella Outbreak in Alamosa, Colorado March and April 2008” the following strategies were identified and were addressed with the 2015 rule amendments:

- Revise regulations associated with controlling hazardous cross connections at water systems;
- Enhance oversight of total coliform sampling, water storage, and distribution systems during inspections, and collect inventory information on these facilities;
- Ensure compliance with the requirement for water systems to maintain residual chlorine levels in water distribution systems.

Since 2016, the Division has regulated cross connections (Section 11.39) and finished water storage tanks (Section 11.28) under the new regulations. During the last four years of implementation, the Division worked with stakeholders to understand the effectiveness of the rules. Based on this work, the

Division proposed adjusting regulatory requirements based both on the Division's and water systems' implementation of the rules. The Commission agrees that these adjustments will allow a more even and reasonable approach to implementing the rules and allow water systems and the Division to focus resources on public health protection.

Revisions to the Storage Tank Rule (Regulation 11.28)

In 2015, the Commission added Section 11.28 of the Colorado Primary Drinking Water Regulations to include the Storage Tank Rule to further protect public health and public water systems from potential contamination associated with unprotected storage tanks within the public water system's drinking water distribution system. The Water Quality Control Division committed during the rulemaking process to continue to engage with stakeholders, solicit input and further evaluate the adopted rule, while providing appropriate protection of the public health and public water systems.

The intent of the storage tank inspections portion of the rulemaking is to provide additional flexibility to water systems while continuing to protect public health and public water systems from potential contamination associated with storage tanks. Prior to this rulemaking, Section 11.28 of the Storage Tank Rule required quarterly periodic inspections of all finished water storage. If a public water system could not perform quarterly periodic inspections of finished water storage, they would have to document an alternative schedule in the finished water storage tank inspection plan. In the subsequent 4 years, the Division has reviewed numerous alternative tank inspection schedules at less frequent than quarterly inspection frequencies. In many parts of the state, due to weather or other reasons, quarterly inspections are not practical and can be a safety hazard to operators. Based on this finding, the Division has determined that assessing a violation if a public water system misses a single quarter periodic tank inspection may cause undue burden on the public water system without adding the corresponding public health protection. If a system performs at least two periodic inspections per calendar year, it is the Division's perspective that public health is still protected and issuing a treatment technique violation is not merited. Industry best practice is still to perform periodic inspections quarterly, and the Division asserts that quarterly inspections are the recommended best practice. Therefore, Commission has amended Section 11.28(2) to require water systems to perform a minimum of two periodic inspections each calendar year and to indicate that inspections may be conducted more frequently than this requirement. A violation will be assessed if a water system fails to perform at least two inspections per calendar year, and the Commission encourages systems to perform periodic inspections quarterly if practicable.

Revisions to Cross-Connection Control Rule (Regulation 11.39)

In 2015, the Commission amended Section 11.39 of the Colorado Primary Drinking Water Regulations' Backflow Prevention Cross-Connection Control Rule to further protect public health and public water systems from potential contamination associated with cross-connections and ensure public water system compliance with Section 25.1.114 & 25.1.114.1 of the Colorado Revised Statutes. The Water Quality Control Division committed during the rulemaking process to continue to engage with stakeholders, solicit input and further evaluate the adopted rule, while providing appropriate protection of the public health and public water systems. In 2018, the Commission amended Section 11.39 in relation to single family homes and duplexes as a direct result of working with suppliers of water on implementing the rules to be equally protective of public health and without being overly burdensome.

The Commission has further revised the Cross-Connection Control Rule to provide additional flexibility to water systems while continuing to protect public health and public water systems from potential contamination associated with cross-connections. The Division recommended that the Commission maintain a stringent requirement for surveying the distribution system to find cross connections, but that requirement not be classified as a treatment technique violation as long as the water system was maintaining a good faith effort to survey their entire system. Also, the ability for the Division to grant alternative schedules for surveying expired on December 31, 2019. The Division and stakeholders agreed that with proper justification, systems should be able to apply and receive alternative schedules as long as those schedules are justified. Also, the Division and stakeholders believed that it would be protective of public health to allow water systems 120 days instead of the previous 60 days to repair failed backflow

assemblies and methods. This is primarily a result of many requests from water systems to extend the timeline to install backflow assemblies when installation on the prescribed timeline is not practical. Having the burden to repair a failed assembly be more burdensome than installing a new assembly on a discovered cross connection is not logical. This change makes the regulation more cohesive and still protects public health.

The Division also recommended that the Commission amend the due dates within the rule for achieving 100% survey completion of the drinking water distribution system and for achieving 90% assembly testing. These due dates under the 2015 version of Regulation 11 were both December 31, 2020. The proposal was to keep the 2019 performance metrics for 2020 and extend the requirement to achieve 100% survey compliance and 90% assembly testing requirements out to December 31, 2021. Based on disruptions in the ability to survey properties, enforce backflow assembly testing requirements, and find backflow assembly testers (renewal testing was halted) all resulting from the COVID-19 outbreak in the spring of 2020, the Division recommended this 1 year extension. The Commission believes this extension will adequately protect public health due to the fact that most water systems have made substantial progress both on system surveys and on assembly testing while the extension will simultaneously acknowledge the real challenges that public water systems face during this time of national crisis.

The Commission agrees with the Water Quality Control Division that the survey requirement no longer be classified as a treatment technique violation. When Section 11.39 was amended in 2015 there was a considerable public health threat due to the fact that many water systems had never surveyed any of their systems to find cross connections. However, after four years of implementation, most water systems have surveyed large portions, if not all of their system, and the potential public health threat has been reduced. Since the public health threat has been reduced the Commission agrees with the Water Quality Control Division that it was appropriate to change the classification of the violation. If a water systems efforts to survey their system are deemed to pose a health risk the division can still classify this as a significant deficiency. If a significant deficiency is not resolved within 120 days the Division can issue a violation for failure to resolve the significant deficiency. That violation would require a Tier 2, 30-day public notice therefore in egregious cases the public will be informed in relatively short order if a system is failing to properly correct issues. By removing the survey requirement as a treatment technique violation while still allowing the Division to find a significant deficiency where a water system's failure to survey is creating a public health risk, the revisions give the Division the flexibility to allow water systems that are working hard to meet the survey requirements to continue that work, while also ensuring that public health is protected from systems that do not survey their distribution system for cross connections.

Revisions to Public Notification Rule (Regulation 11.33)

The Public Notification Rule, section 11.33, specifies that for each applicable MCL, MRDL, treatment technique violation, or other situation requiring tier 2 public notification, the supplier must include in the public notice the corresponding health effects language specified in Table 11.33-VI. Such language was inadvertently omitted during the 2015 rulemaking.

The Commission has revised the standard health effects language in Table 11.33-VI for treatment technique violations identified in the Backflow Prevention and Cross-Connection Control Rule, the Storage Tank Rule and the Sanitary Survey Rule.

For a backflow prevention and cross-connection control rule treatment technique violation, the previous language in Table 11.33-VI did not inform the consumer about potential health effects that consumers may experience and did not explain terms that readers may be unfamiliar with, such as "cross connection." The Commission revised the language in Table 11.33-VI to include this missing information. Also, the Commission removed the examples of sentences that the water system could pick from to describe the violation. The explanations for the violations are not explanations of health effects and the Commission felt that these did not belong in Table 11.33-VI. The water system is still required to include their own, accurate description of the violation, as is required for all public notices, according to the "10 Required Elements" of section 11.33(5) of the Public Notification Rule.

For a storage tank rule treatment technique violation, there was previously no health effects language specified in Table 11.33-VI. Therefore, the Commission added standard health effects language to Table 11.33-VI.

For a failure to correct a significant deficiency treatment technique violation, there was previously no health effects language specified in Table 11.33-VI. Therefore, the Commission added standard health effects language to Table 11.33-VI.

Revisions to the Sanitary Survey Rule (Regulation 11.38)

In the Sanitary Survey Rule, the Commission made a minor edit to avoid water systems receiving multiple, unnecessary violations when violations are discovered on a sanitary survey. Water systems will still be subject to violations during sanitary survey, but with this change they will no longer also violate the sanitary survey rule, which was an unintended consequence and causes undue administrative burden on water systems and the Department without further protecting public health.