

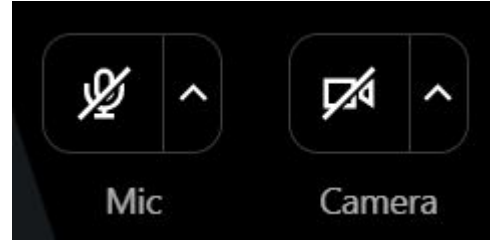


EB 8: Disinfection & EB 10, Chapter 7: Distribution

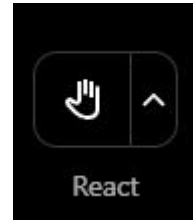
Aug. 13, 2026

Online Tools

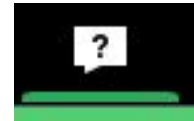
Muted (bottom, middle)



Raise hands (bottom, left)



Use the Question Tool (top, right)



Agenda

- What is MDCR?
- Team Introduction
- Summary from last session
- Today's focus: the entire Engineering Bulletin 8 and Engineering Bulletin 10's Chapter 7
- What have we heard thus far?
- Identifying Gaps
- Open Discussion about Questions and comments
- Next steps / Close Out



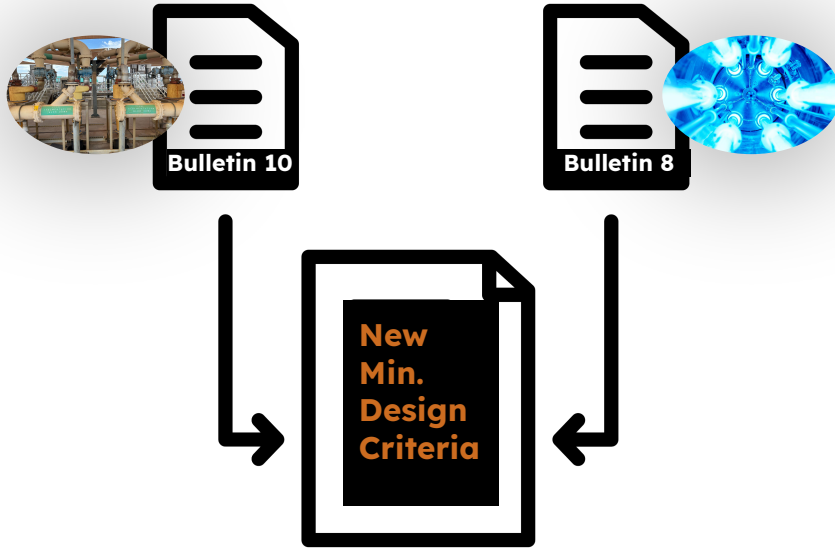
Tips for a Good Meeting

- Share from your experience and perspective
- Please listen when others are speaking
- Allow space for all to participate
- Be generous
- We ask that all present be respectful and kind and we believe that this will lead to good outcomes



What is the Minimum Design Criteria Rule (MDCR) Update?

MDCR will update 18 A.A.C. 5, Article 5 design criteria and associated rules, since existing design requirements reflect 1978 standards and practices.



Key Benefits:

- Improve **regulatory clarity**
- Ensure **public health protections**.
- Modernize to **current industry practices**.
- Align with **Safe Drinking Water Act (SDWA)** requirements

Your Voice Matters!

Take our survey and visit our site to keep up with our project progress.



bit.ly/4m8jZv9



bit.ly/4sRiPLa



Minimum Design Criteria for Public Water Systems and Related Infrastructure

Revised On: Feb. 10th, 2026 - 08:49 am

Summary:

ADEQ intends to update its public water system design and application process rules in 18 A.A.C. 5, Article 5, Minimum Design Criteria for Public Water Systems.

- Article 5: Minimum Design Criteria for Public Water Systems | [View Article 5 >](#)

ADEQ's rules for public water system Minimum Design also include Engineering Bulletins 8 and 10 via incorporation by reference in A.A.C. R18-5-502:

- Engineering Bulletin 8 — Disinfection of Water Systems | [View Bulletin 8 >](#)
- Engineering Bulletin 10 — Guidelines for the Construction of Water Systems | [View Bulletin 10 >](#)

The Minimum Design Criteria Guidelines (Engineering Bulletin 10) and rules for public water systems and related infrastructure in Article 5 currently reflect engineering standards and practices from 1978. The rules and incorporated technical requirements will be updated to reflect current industry standards and practices.

Rulemaking Website

azdeq.gov/rulemaking/minimum-design-criteria



More information and content to come (e.g., external survey).

Finding MDCR Webpage from the ADEQ Homepage (azdeq.gov)



Click on the “Laws/Rules/Policy” tab.



Laws/Rules/Policies

Click “View” under Active Rulemakings
(azdeq.gov/active-rulemakings)



Active Rulemakings

ADEQ maintains a list of active rulemakings | [View >](#)

Under the Water Quality subheading, click
on “View” next to Minimum Design Criteria
for Public Water Systems

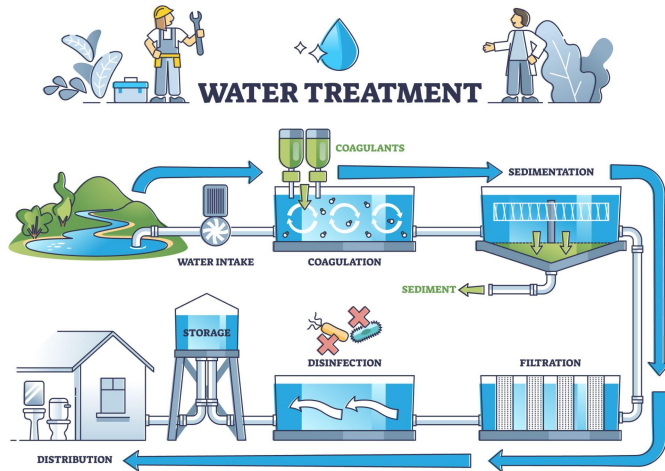


Water Quality

- Drinking Water Rule Updates to Conform to Federal Requirements | [View >](#)
- [Minimum Design Criteria for Public Water Systems](#) | [View >](#)
- Nonpoint Source Discharges: Remediation of Abandoned Hardrock Mines, Inc.

Summary from last session on 7/16/2026

EB 10 Chapter 4: Treatment



- General update to treatment technologies
- Provide piloting testing and blending plan guidance

Today's focus: Engineering Bulletin 8 & Engineering Bulletin 10, Chapter 7



- **Current Content of Bulletin 8**
- **What we've heard**
- **Identified Gaps**
- **Discussion Questions**

Current Content: EB8 - Disinfection

- Chlorination
- Chlorine Feed Equipment
- Types of Chlorination
- Water Main, Storage Tank and Well Disinfection
- Safety Measures and Equipment
- Chlorine Tests
- Emergency Disinfection
- Emergency Disinfection for Individual Drinking Water

Disinfection: Types



What We Heard

- Add chlorine dioxide, UV, and ozone sections
- EB 8 guidance on traditional chlorination is okay



Identified Gaps

- Including UV, ozone, and chlorine dioxide



Discussion Questions

- Is the EB 8 guidance for gas, liquid, and tablet chlorination clear?
- What needs to be added for designing an effective disinfection system?

Disinfection: Safety Measures and Equipment



What We Heard

- EB. 8 presents general chlorine storage requirements for chlorine gas and hypochlorites.



Identified Gaps

- Need more clarity on chlorine tank storage design requirements with chemical systems
- No discussion of safety with other disinfection types



Discussion Questions

- What should be discussed in the new MDCR for a chlorine storage tank that is 20 gallons versus 10,000 gallons?
- Should there be discussion in the new MDCR about eye-wash stations and other PPE?
- What are the secondary containment options you have seen?



Disinfection: Residuals



What We Heard



bit.ly/4m8jZv9



Discussion Questions

- **Disinfection Residual:** How should the new MDC clarify management of the distribution system disinfection residual?
- **Residuals:** What information related to chlorine residuals do you feel is missing from the current EB10 document?



Disinfection: Standards



What We Heard

- Generally needs to be updated to match AWWA standards
- Chlorine gas standards need updating



Identified Gaps

- NSF certification for disinfection device and disinfectant



Discussion Questions

- Are there any sections that may need to be separated into their own section and discussed in more detail?

Disinfection: Construction Procedures



What We Heard

- E.B. 8 is too general about main and storage tank disinfection.
- E.B. 8 does not cover this topic in-depth.



Discussion Questions

- What are challenges you encounter during disinfection testing, specifically timing it with the Approval of Construction? Do you have recommendations for how to alleviate these challenges?
- What are the common practices to disinfect before serving the public:
 - Water Main
 - Storage tank
 - Well
 - Booster Pump
 - Other appurtenances



Disinfection: Dosage Calculation



What We Heard

- 4-log removal calculation for virus
- Chlorine residual target
- Maximum Chlorine dosage to avoid over-chlorination and DBP formation



Identified Gaps

- Need CT tables for log removal
- Need methods to develop t_{10}/T ratios
- Need alternative disinfection dosage calculations



Discussion Questions

- Are the chlorine dosage calculations for well, storage tank, and waterline clear?
- How should the dosage or usage of UV, ozone, and alternative disinfection be measured?

Disinfection: Source Water



What We Heard

- Disinfection considerations for surface water sources need to be better defined vs well sources



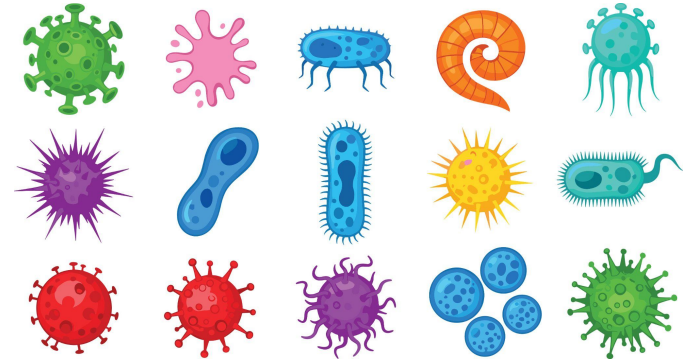
Identified Gaps

- No 4-log calculation for virus
- No alternative disinfection dosage calculations
- No comparison between surface water and groundwater disinfection requirements



Discussion Questions

- How is disinfection different for systems that have surface water sources versus groundwater sources?





Distribution:

- **Current Content in Bulletin 10**
- **What we've heard**
- **Identified Gaps**
- **Discussion Questions**

Current Content: EB10, Chap. 7 – Distribution

- Materials
- Water Main and System Design
- Valving
- Fire Protection and Hydrants
- Protection of Water Mains Near Sewers
- Surface Water Crossings
- Cross Connections
- Water Mains Crossing Utilities for Transportation Facilities
- Water Service
- Water Loading Stations
- Installation of Mains
- Dual Distribution Systems

Distribution: Water Main Design



What We Heard

- Include water demand calculation criteria



Identified Gaps

- Add language about distribution system valve rates of closure to prevent water hammer
- Pressure reducing devices when static pressures exceed 100 psi
- Update to provide consistent guidance for cross connections



Discussion Questions

- What terms would be valuable to clarify within a definitions section (e.g., different types of hydrants)?
- What figures/schematics would be beneficial to include (e.g., schematic showing depth and separation for distribution piping)?



Distribution: Water Main Appurtenances



What We Heard

- Sewer-water line crossings material and recommendation needs updating



Identified Gaps

- Include discussion on system valving, sample taps, and emergency connection for interconnects
- Expand to include other pipe materials and joints for pipe installation
- Air relief valve discharge piping and valve distances for widely scattered customers



Discussion Questions

- What items (e.g., valves) need to be discussed in designing a distribution system?
- What is a standpipe?
- Are there any sections that may need to be separated into their own section and discussed in more detail?

Distribution: Fire Flow



What We Heard

- Clarify fire flow requirements



Identified Gaps

- Include discussion on fire hydrant types, color coding, spacing, etc.
- Fire flow test requirements



Discussion Questions

- What elements of the fire flow are important with the hydraulic analysis?



Distribution: Corrosion Control



What We Heard

- Provide better guidance on corrosion control treatment



Identified Gaps

- Add language on coatings and materials selection



Discussion Questions

- What are key elements of corrosion control that should be discussed within the MDC document?

Open Discussion



Thank You!

Join us for our next virtual engagement session!



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- Matthew Olson
- Sara Dekkiche
- Heidi Welborn
- Stephanie Huang
- Hafez Ahmed
- Nicole Rubenstein