



## CONTRACTORS STATE LICENSE BOARD LICENSE EXAMINATION STUDY GUIDE



### WATER CONDITIONING (C-55)

#### Content of the Examination

The Water Conditioning (C-55) Examination is divided into four major sections:

#### 1. Planning and Estimating (22%)

- Water analysis
- Job site evaluation
- System selection
- Planning and estimating

#### 2. Water Systems, Component Installation, and Startup (29%)

- Piping and valves
- Equipment installation
- Drain connections/backflow
- Electrical connections
- Startup and calibration

#### 3. Troubleshooting, Maintenance, Repair, and/or Replacement (34%)

- Service and maintenance
- Troubleshooting
- Repair and replacement
- Disinfection

#### 4. Safety (15%)

- Personnel safety
- Handling hazardous materials
- Environmental safety
- Tool and equipment safety

*\*Percentages are approximate\**

#### Test Site Policy

This is a closed-book examination. No reference materials may be used during the examination. All materials brought to the examination site must be left in an unmonitored area at your own risk.

#### Test Strategy

This is a multiple-choice examination with four choices per question. Examination questions are written to provide only one BEST answer. Some questions require mathematical computation. A calculator will be provided.

There is no penalty for guessing. If you are unsure about a particular question, it is better to try to answer the question than to leave the question blank.

Plenty of time is provided to answer all examination questions, so be sure to read each question and its four choices completely and carefully before selecting the BEST possible answer to the question.

## Sample Questions

Below are three typical examination questions.  
The correct answer is underlined.

1. What is the MAXIMUM fluoride level permitted in drinking water?
  - a. 2.0 mg/L
  - b. 4.0 mg/L
  - c. 6.0 mg/L
  - d. 8.0 mg/L
  
2. A softener with a rated capacity of 30,000 grains treating water with 171 mg/L of hardness should be able to soften a MAXIMUM of how many gallons of water before regeneration is necessary?
  - a. 175.43 gallons
  - b. 3,000 gallons
  - c. 17,100 gallons
  - d. 30,000 gallons
  
3. What is the function of a cation exchange unit?
  - a. To oxidize iron from the water
  - b. To remove calcium and magnesium
  - c. To reduce dissolved solids
  - d. To increase pH

*\*All questions are written and reviewed by licensed contractors who are actively working in the trade\**

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## Resources

*Publisher information for reference books and code is provided below. Other sources for reference books may be found online.*

**California code books can be viewed online:**  
**[www.dgs.ca.gov/bsc](http://www.dgs.ca.gov/bsc)**

**2019 California Plumbing Code.** California Code of Regulations, Title 24. International Association of Plumbing and Mechanical Officials (IAPMO).

PHONE: (909) 472-4100

INTERNET: [www.iapmo.org](http://www.iapmo.org)

**California Health & Safety Code. Division 104 Environmental Health, Part 12 Drinking Water, Chapter 4 California Safe Drinking Water Act and Chapter 5 Water Equipment and Control.** INTERNET:

[leginfo.legislature.ca.gov/faces/codes.xhtml](http://leginfo.legislature.ca.gov/faces/codes.xhtml)

**Fundamentals of Water Treatment Unit Processes: Physical, Chemical, and Biological.**

**2010.** Hendricks, D. CRC Press.

PHONE: (800) 272-7737

INTERNET: [www.crcpress.com](http://www.crcpress.com)

**State of California General Industry & Electrical Safety Orders (Cal/OSHA) and State of California Construction & Electrical Safety Orders (Cal/OSHA).**

**2019.** California Code of Regulations, Title 8. Mancomm.

PHONE: (877) 626-2666

INTERNET: [www.mancomm.com](http://www.mancomm.com)

VIEW ONLINE:

[www.dir.ca.gov/dosh/LawsAndRegulations.htm](http://www.dir.ca.gov/dosh/LawsAndRegulations.htm)

**Water Quality Association Knowledge Base.**

INTERNET: [www.wqa.org/programs-services/education/knowledge-base](http://www.wqa.org/programs-services/education/knowledge-base)

*\*Publisher information is current as of 9/19\**