



# ONLINE COURSE 2 DAYS CHLORINE HANDLING REFRESHER

**Developer and Owner - BC Water and Waste Association (BCWWA)**

This course updates operators on the current processes for the safe handling of chlorine gas. You should take this course if you are maintaining a facility that uses chlorine gas or hypochlorite solutions for disinfection purposes, and have previously completed chlorine handling training. After completing this course, you will be able to: Understand the physical and chemical properties of chlorine and how chlorine works as a disinfectant; Understand how to safely handle chlorine and hypochlorite products and maintain chlorine equipment; Understand and apply chlorine safety practices, and prepare for emergency response.

Topic	Objectives
Introduction	<ul style="list-style-type: none"> <li>describe chlorine use and history</li> </ul>
Chlorination and Hypochlorination	<ul style="list-style-type: none"> <li>describe chlorination process</li> <li>describe physical and chemical properties of chlorine</li> <li>describe chlorine measuring technology</li> </ul>
Math	<ul style="list-style-type: none"> <li>learning to find the applicable formulas</li> <li>breaking formulas into segments</li> <li>converting all units to answer units</li> </ul>
Hypochlorite Equipment	<ul style="list-style-type: none"> <li>Describe hypochlorite equipment</li> <li>explain the function of various metering pumps</li> <li>describe on site hypochlorite generation</li> <li>list steps in hypochlorinator repair and maintenance</li> <li>describe the steps in metering pump maintenance</li> </ul>
Chlorine Gas Equipment and Maintenance	<ul style="list-style-type: none"> <li>Identify types of equipment and accessories</li> <li>describe chlorine gas withdrawal rates</li> <li>describe various chlorinators</li> <li>piping systems and pressure manifolds</li> <li>describe chlorine evaporators</li> </ul>
Process Controls	<ul style="list-style-type: none"> <li>define metering and control</li> <li>describe the advantages of automatic control</li> <li>describe the function of a valve control</li> <li>describe various adjustments and control options</li> </ul>

**Topic****Objectives**

Safe Handling Practices for Hypochlorites

- describe safe handling procedures for sodium hypochlorite
- describe safe handling procedures for calcium hypochlorite

Safe Handling Practices for Chlorine Gas

- understand toxic effect of chlorine
- describe PPE for specific situations
- describe first aid practices for chlorine exposure

Emergency Response Planning

- develop an Emergency Response Plan
- identifying stakeholders
- participate in audits
- identify training requirements.

## ONLINE COURSE 2 DAYS CHLORINE HANDLING REFRESHER

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Company Mailing Address \_\_\_\_\_

City, Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

ACWWA Membership #: \_\_\_\_\_ WEF Membership #: \_\_\_\_\_

If no membership number is listed, you will be invoiced as a non-member. See pricing below.

### Fee for ACWWA or WEF Members & Employees of UTILITY Members

Course:  $\$350.00 + \$52.50 \text{ HST (15\%)} = \$402.50$

### Fee for Non – Members

Course:  $\$395.00 + \$59.25 \text{ HST (15\%)} = \$454.25$

**Invoices will be sent to the address listed above.**

**PO number to be included on the invoice** \_\_\_\_\_

**Payment can be made by Visa, Master Card or cheque.**

Card Holder's Name \_\_\_\_\_

Credit Card Number \_\_\_\_\_ Expiry \_\_\_\_\_

Signature \_\_\_\_\_

Email address for credit card receipt \_\_\_\_\_

Cheques should be made payable to:

**ACWWA**

PO Box 28141 · Dartmouth, NS · B2W 6E2

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