

**Developer and Owner – WWOTC**

**Online Course – Instructor Led**

## **Sludge Conditioning Basics**

**October 3-4, 2023 (1:00-5:00 AST)**

### **Course Objective / Description**

This course has been designed for wastewater treatment plant operators responsible for sludge conditioning and mechanical dewatering using polymer flocculants. The material addresses how an operator would assess selecting an appropriate polymer flocculant for a conditioning a stabilized sludge prior to feeding this sludge to a mechanical dewatering device. The materials presented are complemented with considerable hands on practice by the trainees with a jar tester. Selection among polymer types and optimizing a particular polymer type will be integral to the day's instruction. The cost of polymer usage is also addressed.

### **What will be covered:**

- Review basic polymer types (cationic, anionic, and non-ionic)
- Measuring the effectiveness of sludge conditioning through measuring sludge settling rates and CST measurements
- Calculating the amounts of polymer needed for and make up polymer stock solutions
- Jar testing to identify a preferred polymer type and then optimize the rate of addition
- Polymer costs associated with sludge conditioning

<b>Lesson</b>	<b>Description</b>	<b>Contact Hours</b>
Lesson 1	Introduction and Overview	0.5
Lesson 2	Polymer Calculations	1.0
Lesson 3	Sludge Settling and Capillary Suction	0.5
Break		
Lesson 4	Sludge Settling and Capillary Suction	1.0
Lesson 5	Jar Test Usage	0.75
Lunch		
Lesson 6	Polymer Selection and Jar Testing	1.5
Break		
Lesson 7	Cost Calculations of Polymer Treatment	1.25
Exam	0.5	

Total Instruction/Contact Time:	7.0	
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**CEU: 0.7**

## Sludge Conditioning Basics

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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:  $\$355.00 + \$53.25 \text{ HST (15\%)} = \$408.25$

### **Fee for Non – Members**

Course:  $\$380.00 + \$57.00 \text{ HST (15\%)} = \$437.00$

**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

Phone 902-434-6002 Fax 902-435-7796