

This Training Session:

Whether you are ground water, surface water, or wastewater, this is a superb class to learn everything about working with chlorine. All forms of chlorine; gas, liquid, and solid, will be covered. Learn about the properties, history, applications, feed equipment, handling, maintenance, and how to be safe when working with chlorine.

What do you do if your system is required to meet 4 log disinfection criteria? Or maybe you have a problem with disinfection by products! In this class you will also be introduced to UV & Ozone as alternative or additional disinfection measures.

Remember, disinfection training applies to both Water & Wastewater Operators!

For additional information:

Phone
406-438-2070

-or-

Visit our website
<http://www.mrws.org>

Montana Rural Water Systems
925 7th Avenue South
Great Falls, MT. 59405

Phone: 406-454-1151

Fax: 406-454-3116

E-mail: mrws@bresnan.net

*"This training session is designed for **Awareness Training** and is not intended to be your only source of information!"*

IF YOU PLAN ON ATTENDING THIS WORKSHOP, PLEASE E-MAIL THE MRWS OFFICE AT

mrws@bresnan.net

I need a headcount for refreshments and for the speakers to have a count for handouts.

Speaker Contact Info:



Greg Peterson
President

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Montana Rural Water Systems Inc.

Presents

2018 Chlorination & Alternative Disinfection Options

Training Conducted by:

Greg Peterson,
Chemical Montana Company

Nick Clos & Julie Allen
Montana Rural Water Systems

Recommended for Operators, Managers, & First Responders

No Registration Fee !!
CEC's: 0.6 Dual

Date & Location:

Butte, MT.

Thursday

April 26, 2018

@

Marcom Labs Conference

Room

600 S. Excelsior

Butte, MT



ADA Meeting Announcement Statement:

MRWS will make reasonable modifications for persons with disabilities who wish to participate in this public training. If you would like to request an accommodation, contact the MRWS office 5 days prior to the event to advise us of the nature of the accommodation that you need.

Morning Session:

8:30—9:00 AM REGISTRATION

Greg Peterson — Chemical Montana Company

9:00—10:00 AM — GAS CHLORINE

- ◆ Physical Properties
- ◆ O & M
- ◆ Safety

10:00—11:00 AM — SODIUM HYPOCHLORITE

- ◆ Physical Properties.
- ◆ O & M
- ◆ Safety

11:00—12:00 PM — CALCIUM HYPOCHORITE

- ◆ Physical Properties
- ◆ O & M
- ◆ Safety

12:00—1:00 PM — >>>> LUNCH <<<<

Afternoon Session

Nick Clos/Julie Allen— MRWS

1:00—2:00 PM UV 101—Introduction to Ultraviolet Light & Ozone Disinfection Systems.

- ◆ History
- ◆ Fundamentals
- ◆ Microbial Response
- ◆ Planning & Design Elements
- ◆ Validation Testing
- ◆ VIDEO: Ozone & UV (produced by AWWA) (15 Min.)

2:00—2:30 PM DISINFECTION STRATEGIES: A Video by AWWA

- ◆ Why disinfection is necessary
- ◆ Types of waterborne disease
- ◆ Review of 2001 Walkerton, Ontario, and 1993 Milwaukee, Wisconsin, outbreaks
- ◆ Operational issues, advantages, and disadvantages
- ◆ Disinfectant residuals and DBP formation

2:30—4:00 PM — PROPER CARE OF CI2 EQUIPMENT

- ◆ Troubleshooting Chlorinators
- ◆ Troubleshooting Chemical Feed Pumps
- ◆ Troubleshooting Common Problems
- ◆ Demonstration on Rebuilding a Chemical Feed Pump

4:00 PM — Turn in CEC Forms & Evaluations

>>>> Adjourn <<<<

BE CAREFUL

**Learning May Occur at
This Workshop**

About Our Speakers:

Greg Peterson is the owner of **Chemical Montana Company**. He has been in the chemical business for over 30 years, so he has a vast knowledge of chlorine and other chemicals used in the water treatment industry. Additionally, Greg has generously participated as a speaker at numerous training sessions and conferences for MRWS over the years.

Nick Clos is a Circuit Rider with Montana Rural Water Systems (MRWS) for over 20 years and has been in the water and/or wastewater industry for over 31 years. He has worked with hundreds of communities in troubleshooting chlorine systems and helping set up new chlorination systems.



For professionals in fields other than water or wastewater that need continuing education credit for this training, please contact your training authority and bring appropriate forms needed to receive credit. I will be happy to provide needed information or verify your attendance.