

ONLINE TRAINING/WEBINAR SPEAKER INFO. BIO & TOPIC ABSTRACT

Please provide the following information and email to support@nwmoa.com.

If you are presenting on multiple topics during this event, please fill out one form for each topic.

Name: Bill Andrene Suffix: Job Title: Butte-Silver Bow

Wastewater Treatment Plan Superintendent

(i.e.: Ph.D., P.E., Jr.)

Company: Butte-Silver Bow

Mailing Address: 800 Centennial Ave

City: Butte State/Province: MT Postal Code: 59701 Country: USA

Telephone: 406-497-6553 Cell Ph:

Email: wandrene@bsb.gov Website:

☐ Checking this Box confirms that I agree to be videoed and recorded for the duration of the Online Training/Webinar.

1. Speaker Biography (please provide one paragraph – 150 words or less)

Bill Andrene has worked at the Butte-Silver Bow Wastewater Treatment Plant for 15 years. He started as an operator, then moved on to the maintenance side, which allowed him to become intimately familiar with all aspects of the plant as it was operated before the upgrade to an MBR. Through the planning, design, and construction process for the MBR, two previous Superintendents reached retirement age and left, offering the opportunity for Bill to fill this role shortly after startup of the new treatment process. Bill was ready for the challenge and thoroughly worked his way into understanding and leading the operation of the WWTP. He was present throughout the construction and startup activities, which allowed him to gain a foundation upon which to build with operational experience gained through the many early-operation hickups typical for any new treatment plant. Bill is currently overseeing the third season of nutrient removal optimization for which he will present preliminary results among other topics.

- **2.** *Topic Title* (please provide the topic title for your presentation) Design and Operation of the Butte-Silver Bow MBR
- **3.** *Topic Abstract* (please provide a minimum of 250 words for your presentation and describe how it relates to membrane technology)

Between 2006 to 2016 the Butte-Silver Bow wastewater treatment plant underwent a transformation from a simple BOD removal plant to a state-of-the-art nutriet removal facility using membrane bioreactor technology. This presentation summarizes the bioreactor and membrane basin design, process startup pains and operational challenges, and treatment performance since 2016. Highlights include process configuration for summer and non-summer operation, conquering foaming upsets, and nutrient removal successes of the first few seasons of operation of the MBR.



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- **4. Polling Questions** (please provide up to 5 questions you might ask the audience, relative to your topic, which you would like to engage with them on. Questions are multiple choice. A right or wrong answer is not required. If you do provide a question with only 1 correct answer, please indicate which answer is correct. Provide 3 answers to choose from.)
 - 1. Q. See Rika's form/Co-Presenters
 - A 1
 - A 2
 - A 3
 - 2. O.
 - A 1
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 - 4. Q.
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 - 5. Q.
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 - A 2
 - A 3