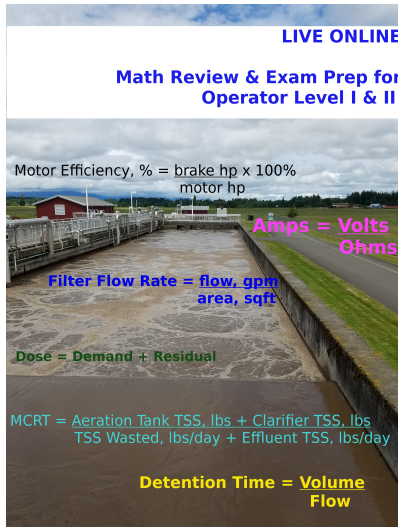


Math Review & Exam Prep Operator Level I & II



Math is involved in every aspect of water and wastewater treatment. While many of the calculations are automated these days, it is still important to know how to use the formulas and perform calculations manually. Who has not been in the field and had to quickly calculate the flow rate to check a water leak or verify pump rates? Without being able to verify numbers how can we be sure that what the computer or SCADA system is displaying is correct? Last but not least, there are always the exams we need to pass to advance our certification levels. So, for one or another reason, it is important to understand the math used in the water field.

Our LIVE ONLINE “**Math Review & Exam Prep for Operator Level I & II**” class consists of four (4) 3-hour sessions, totalling 12 hours of classroom time.

This workshop is perfect for operators who understand the principles of water and wastewater math and are interested in obtaining their Operator level 1 or 2 certificate.

In this workshop you will learn not to just “plug-in” numbers into formulas but what the formulas actually mean and how to apply them.

The workshop will:

- start with a brief refresher on basic math functions. Just like in a good exercise program you will first warm up those rusty brain cells by learning about fractions, decimals, percentages, ratios, unit conversions, area and volume measurements, unit analysis, and solving for the “unknown (x)”

- cover formulas to calculate flows, velocity, settling rate, detention time, loading rates, solids removal, and other calculations related to the treatment process
- explore formulas dealing with pump rates, pump capacity, static and dynamic head, horsepower, etc.
- include calculations related to disinfection such as dosage, demand, residual, and chlorine availability in gas, liquid, and solid feed systems
- explain how to make sense of word problems and determine which formula to use to obtain the correct answer
- provide many opportunities to practice and solve math problems typical of those encountered on certification exams

Throughout this workshop we will utilize real life scenarios to demonstrate how these formulas are used in your daily life as an operator. To help you better understand and become comfortable with how to use these formulas we will work through a variety of “word problems” reflecting situations you may encounter in the certification exam, field, treatment plant, or laboratory. Together with the instructor you will go through each step of solving these math problems. We will discuss the problems you may encounter and share tricks for how to master “operator math”.

This LIVE ONLINE “**Math Review & Exam Prep for Operator Level I & II**” workshop will provide you with essential math skills necessary to succeed in your career and obtain or maintain your water or wastewater operator certification.

Date: January 19th, 20th, 26th, & 27th

Time: 8:00am to 11:15am

Where: Live Online

Fee: \$420

CEUs: WA & OR Wastewater CEUs

WA Department of Health / WA Certification Services Course ID: TBD, 1.2 CEUs requested

WA Department of Ecology Course ID: TBD, 1.2 CEUs requested

OSEAC Course ID: TBD, 1.2 WW & DWP CEUs requested

Instructor: [Jim Lee](#)

Registration: online: www.pro-train.org; phone: (360) 490-2426; email: erika@pro-train.org

Contact: erika@pro-train.org or (360) 490-2426