

"Math Review and Exam Prep For Operator Level 1 & 2" IN-PERSON Workshop

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 two day "Math Review & Exam Prep for Operators Level 1 & 2" workshop is perfect for operators who understand the principles of wastewater and water math and are interested in obtaining their operator level 1, or 2 certificate.

In this workshop you will not to just "plug-in" numbers into formulas but learn 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
- study 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 the 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 field, treatment plant, or laboratory. We will discuss the problems you may encounter and share tricks for how to master "operator math". This two-day "Math Review & Exam Prep for Operators Level 1 & 2" workshop will provide you with essential math skills necessary to succeed in your career and obtain or maintain your water or wastewater operator certification.