

# Operator mathematics Review

At

## Broad Creek Public Service District, Hilton Head, SC

**Date:** June 18, 19, 2008

**Time:** 8:30 A.M. to 4:30 P.M. (14.0 Contact Hours)

### Who's presenting?

**Jim Matthews:** Your instructor is president of On Line Environmental, Inc. Jim is a graduate of The Citadel and has worked in plant and system operations since 1976. He holds a SC A license in Water Treatment, Biological and Physical/Chemical Wastewater Treatment. He has been teaching and assisting operators for public and private organizations for the last 21 years. Jim's teaching style encourages class participation while carefully explaining concepts essential to understanding the many topics associated with distribution system operations, maintenance and management.

### Who should attend and why?

- **Trainees** seeking more understanding of operator mathematics and preparing for certification exams
- **Operators** preparing for all levels of operator certification exams
- **Operators** wishing to improve their skills and understanding of mathematics
- **Operators** seeking continuing education to be applied toward license renewal
- **Managers** seeking to improve their technical understanding
- **Anyone** wishing to further their understanding of operations mathematics

**Course Description:** This 14-hour course will review operator mathematics as applied to water treatment and distribution and wastewater collection and treatment. Focus will be on practical applications as well as certification exam math problems. The class format is structured, yet informal, encouraging learning and class participation.

**Course Objectives:** At the end of the course, the participant, with the aid of a calculator and a formula/conversion table will be able to

1. Demonstrate the ability to convert various measurement systems into other units of measurement, such as metric to English, etc.
2. Perform mathematical operations using the proper order of operations.
3. Round numbers to a specified place or number of significant digits.
4. Calculate arithmetic and geometric averages.
5. Understand and apply various formulas as those used in routine operations and on certification exams.
6. Calculate perimeters, areas and volumes of various geometric shapes.
7. Calculate operational parameters such as detention time, surface loading rate, weir overflow rate and time required to fill/empty tanks and other vessels.
8. Calculate pump horsepower.
9. Calculate plant operational efficiencies.
10. Calculate chemical dosages, feed rates, chlorine demand, and residual.
11. Demonstrate a working knowledge of percent concepts.
12. Calculate velocity and flow rates in a channel and closed pipe.
13. Calculate chemical problems as related to concentration and formula weight.
14. Convert pressure measurements to head and vice versa.

**Please bring a calculator to class; workbook, interactive CD and pens will be provided.**

**A record of your attendance will be kept on file and a certificate of completion will be issued to each attendee.**

Registration Fee: \$195.00

Contact Jim or Linda at 803-939-4983 or email Jim at [jmatthews@oleinc.com](mailto:jmatthews@oleinc.com) for directions to the class location.

## Class Registration Form

(Must be received at least **two business days** prior to class date)

**Operator Mathematics Review in Hilton Head, SC, June 18, 19, 2008: \$195.00 registration fee**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email: \_\_\_\_\_ Fax: \_\_\_\_\_

Class: \_\_\_\_\_

Payment method:  Visa  MasterCard  Purchase Order  Check enclosed

Purchase Order Number: \_\_\_\_\_

Billing address (if different): \_\_\_\_\_

Credit Card # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Expires \_\_\_\_/\_\_\_\_

Be sure the billing address is the same address used for your credit card.

You may also call 803-939-4983 to pay by credit card.

**Refund Policy:** A 90% refund will be given for cancellations no later than two business days prior to the class start date. Substitutions are allowed. On Line Environmental reserves the right to cancel or reschedule any class due to inadequate enrollment or circumstances beyond the control of the company or instructor. A full refund will be offered in such cases.

Registration must be made at least **2 business days** prior to start date of class to allow time for printing. Class size is limited, register early.

Contact us at:

**On Line Environmental, Inc.**  
200-B Rich Lex Drive  
Lexington, SC 29072

803-939-4983  
Fax: 803-939-4984

[www.oleinc.com](http://www.oleinc.com)  
[jmatthews@oleinc.com](mailto:jmatthews@oleinc.com)

