



Presents  
**Wastewater Plant Operations Workshop**  
Wednesday, November 4 and Thursday November 5, 2015  
at  
Dayton WWTP  
2800 Guthrie Road  
Dayton, OH 45417

**REGISTER EARLY!!!**  
**REGISTRATION IS LIMITED TO 20 PARTICIPANTS!**

Class is OEPA approved for 11.5 contact hours

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**This is a HANDS ON Workshop that includes training in the classroom, laboratory and in the treatment plant.**

**If your plant has a microscope that can be easily transported, please bring it to the class. The class will cover proper use and care for microscopes.**

**Class Agenda is below.**

**Operators are encouraged to bring samples from your plant for evaluation**

Rich Weigand, Director of the West Virginia Environmental Training Center, will be the instructor for this program. He has evaluated and photographed dozens of wastewater samples during the past 25 years. Rich is a Certified Environmental Trainer and a Class III Operator. He has taught numerous workshops at WEFTEC and throughout the United States and Canada.

- Ohio EPA contact hours (approval numbers will be given at class)
- Coffee, Doughnuts and Lunch included

**Costs:** \$125 per participant

**NOTE: Class size is limited to 20 participants, the first twenty registered.**

**Register Online at [www.ohiowea.org](http://www.ohiowea.org)**

***Credit Card** payments can **only** be made through on-line registration:*

More info is available on our website, SWOWEA Online! [www.swowea.org](http://www.swowea.org)

**For more information contact:** Dave Reinker @ 937-847-6651

**Directions:**

**From Dayton: Main Street Area**

<http://mapq.st/XqsNuZ>

**From Wright Patterson AFB Area:**

<http://mapq.st/VQCRfO>

**From North:**

<http://mapq.st/WJRla2>

**From South:**

<http://mapq.st/XWyrct>

## **Wastewater Microbiology What Every Operator Needs To Know**

### **Day 1, 9 a.m. – 4 p.m. (Lunch noon to 1p.m.)**

- I. Micro – one tool in the process control tool box -
- II. Understanding biological treatment processes -)
  - ❖ Treatment plant visit
  - ❖ Sampling – Techniques and locations
- III. Scope Basics – Seeing the light -
  - 1) Parts of the scope
  - 2) Brightfield, darkfield and phase contrast
  - 3) Dos and don'ts – getting the most out of your instrument
  - 4) Suggested models, pricing, vendors
  - 5) Practice using microscopes & wet mounts
- IV. The Microbes (NOT BUGS!) –
  - 1) Floc evaluation: size, structure, bulk liquid
  - \* 2) Sample evaluation –
  - 3) Protozoa: Amoebas, ciliates, free swimmers, crawlers
  - 4) Metazoa: Rotifers, water bears
  - 5) Worms
  - 6) Others
  - 7) Algae
  - 8) Inorganic particles
  - \* 9) Sample evaluation -

### **Day 2, 8:30 a.m. – 3 p.m. (Lunch noon to 1p.m.)**

- I. Those Darn Filaments!
  - 1) Identification of the most common ones –
  - 2) Location –
  - 3) Staining basics –
  - \* 4) Sample evaluation –
  - 5) Bulking & foaming problems –
  - 6) Foam & filament control strategies -
- II. Putting it all together – sample evaluation & troubleshooting –
  - ❖ Evaluating samples from students
- III. Wrap Up – Where do you go from here? –
  - DQ try this at home