Georgia Rural Water Association

P.O. Box 383 ● Barnesville, GA 30204 ● 770-358-0221 ● *fax 770-358-4379*
Website: WWW.GRWA.ORG ● E-Mail: grwa1@grwa.org and info@grwa.org

Microscopic Workshop for the Activated Sludge WWTP

June 6 – 7, 2017 – Athens, GA

Middle Oconee Reclamation Facility
400 Will Hunter Road
Athens, GA 30606

Online Registration Available
WWW.GRWA.ORG

12 CE Points for Wastewater Operators

$300.00 (Includes Lunch Both Days)

Space is Limited – Seats will not be reserved until payment is complete

Course Starts at 8:30 A.M.

First Name: _____ Last Name: _____

System / Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Email for Confirmation: _____

Please indicate how you would like to receive your Confirmation Letter_____E-Mail _____Fax

******A Confirmation Letter Will be Faxed or E-Mailed 3-5 Business Days After We Receive Your Registration**

Course Description

A hands-on microscopic workshop for the wastewater treatment plant operator and/or anyone who is responsible for the optimization and/or troubleshooting of an activated sludge wastewater treatment plant. The facilitator will introduce the participant to the operation of the microscope and to the most essential elements of activated sludge microbiology which will enable the operator to quickly and easily assess the most important quality characteristics of the biomass and make useful process control decisions.

The students are strongly encouraged to bring in microscopes from their own facility as well as a 250 ml sample of sludge from their own aeration basin. The sample bottle should be filled only half-full to maintain head space for D.O. and be kept chilled to maintain biological viability.

Instructors		
Jon Henderson – Wastewater Instructor, Georgia Rural Water Association	Jeremy Morgan – Technical Services / Chemical Engineer, BioConversion Technology	Steve Leach – Technical Director, Novozymes

See Agenda on Next Page

Microscopic Workshop Agenda

Day One

8:15 AM Check-in

8:30 AM

Introduction of Instructors

Review Agenda

Microbiology: One More PC Tool

9:00 AM Biological Processes Overview

Fixed Film

Activated Sludge

Conventional

Extended Air

Membrane Filtration

9:30 AM Sampling Techniques and Locations

10:00 AM Introduction to Your Microscope

Parts of the Scope

Brighfield, Darkfield, Phase Contrast

Getting the most from your instrument

What to Buy if you don't have one

Practice Using the Microscope and Wet Mounts

12:00 PM Lunch (Provided on-site)

1:00 PM Microbiology Basics

Floc Evaluation: Size, Structure, Bulk Liquid

Bacteria

Protozoa: Amoebas, Flagellates, Ciliates, Suctoria

Metazoa

Worms

Algae

Fungus

Inorganic Particles

Hands on Sample Evaluation of Your Sludge

4:00 PM Summary

4:30 PM Adjourn

Day Two

8:30 AM Review

9:00 AM Filamentous Bacteria

Identification

Location

Staining Basics

Practice Staining Techniques with Your Sludge

Bulking & Foaming Problems

Foam & Filament Control Strategies

12:00 PM Lunch (Provided on-site)

1:00 PM Troubleshooting

Hands on Sample Evaluation of Your Sludge

4:00 PM Wrap Up - Where Do You Go From Here?

4:30 PM Dismiss

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