



## Wastewater Microscopy Course

May 23, 2024 – University Research Park, 505 S. Rosa Road, Madison, WI 53719  
(6 Wastewater Credits)

The class will start promptly at 9:30 am. The class will end at 3:30 pm.

**9:30 am – 9:45 am:** *Introduction to microscopy* - Benefits of performing microscopy on activated sludge process, course overview and specific areas to focus on.

**9:45 am – 10:00 am:** *Microscopy handling practices* – Preventing damage to microscopes, routine maintenance and other important notes.

**10:00 am – 10:20 am:** *Choosing a microscope* – Microscope types, lenses and their purposes.

**10:20 am – 10:45 am:** *How to perform microscopy on wastewater samples* – Preparing wet mounts and smears, what to look for in floc, filaments, higher life forms, bulk liquid, sludge age, problem solving.

**10:45 am – 11:15 am:** *Filaments* – Identification, impact on mixed liquor, common filament types and how to ID (*M. parvicella*, *NALO*, *S. natant*, *Thiothrix spp*, *Low F:M*, *021N*), filament environments and viability, filamentous growth control options.

**11:15 am – 11:30 am:** *Microscopy stains* – Gram stains, what they are and how to perform them as well as other useful stains like Neisser stain, sulfur accumulation, PHB, fungi stains.

**11:30 am – 12:15 pm:** *Working lunch* – Identifying interesting microbes in wastewater.

**12:15 pm – 3:15 pm:** *Hands on Microscopy* – Demonstrations, prepping slides, gram staining, microscopy hands-on use, looking at attendees' samples to assess processes, talk about optimizations or problem solving based on observations, talk about sending photos to consultants, discussion and questions.

**3:15 pm – 3:30 pm:** *Conclusions and discussion*

**Course Instructor:** Daniel McKeaton – *Aquafix, Inc.*

**Complete the form below and return to WISCONSIN RURAL WATER ASSOCIATION**

\_\_\_\_\_ **May 23, 2024** – Madison

\_\_\_ No Fee

Name \_\_\_\_\_ DNR Certification Number: \_\_\_\_\_

System/Employer \_\_\_\_\_

Address \_\_\_\_\_

City, State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

**Send form to:** WRWA, 350 Water Way, Plover, WI 54467

Go to [www.wrwa.org](http://www.wrwa.org) - Must fax completed form(s) to (715) 344-5555 or email the completed form(s) to [wrwa@wrwa.org](mailto:wrwa@wrwa.org).

For more information: Phone: (715) 344-7778 Email: [wrwa@wrwa.org](mailto:wrwa@wrwa.org)