

## **Troubleshooting Activated Sludge Operations 7-hour workshop**

### **Troubleshooting Activated Sludge – 2 hrs**

- Floc Formation Problems – pin floc, straggler floc, dispersed growth
- Slime Bulking and Foaming – causes, cures
- Rising sludge/Denitrification
- Foaming
- Filamentous problems – symptoms, causes, cures (short-term/long term)

### **Break**

### **Selectors and Step Feed – 1 hr**

- Advantages and disadvantages of using
- Evaluating performance

### **Microscopic Evaluation of Activated Sludge – 1.5 hr**

- Floc Formation
- Protozoa Identification
- Filament Identification Techniques

### **Lunch**

### **Operating Secondary Clarifiers – 1 hrs**

- Controlling blankets and inventory
- Clarifier State Point Analysis

### **Developing Troubleshooting Charts – 1.5 hr**

- High Sludge Blankets
- High SVI
- High Effluent TSS

### **Question & Answers, Discussion of Problems**