



## **Training Outline – Activated Sludge Optimization Workshop II**

Total Instruction time – 6.0 hours

### **Summary**

This two-day workshop is part of the city of Cannon Beach WWTP's continuing optimization efforts and preparation to transition to two activated sludge basin operations. The workshop includes review of activated sludge design and development of the process control strategies that will be employed during the transition to two basin operations.

### **Training Objectives**

- Document process flows at WWTP under various conditions.
- Understand plant loading and inventory control.
- Confirm process control testing analysis.
- Develop data management plan.
- Develop operating strategies.

### **Outline - Day One**

#### **Activated sludge process overview (90 min)**

Review and document process flows for the following conditions.

- Current flow path
- Transition to dry weather operation flow path
- Dry weather flow path
- Transition to wet weather flow path
- Wet weather flow path

#### **Discuss plant loading, aeration and inventory control. (30 min)**

- WWTP data review
- Process calculator review
- Process aeration system data review

#### **Process Control Testing Review (60 Min)**

- MLSS, MLVSS, OUR, Settleometer, BOD
- ORP, Sludge Blanket, nitrate
- Field walk to demonstrate ORP, Sludge Blanket and nitrate sampling.

**Outline - Day Two**

**Sampling and analysis, data collection strategies (30 Min)**

- Review of sampling plan
- Process spreadsheet review
- Data management

**Develop operating strategies (120 min)**

- Return activated sludge (RAS)
- Waste activated sludge (WAS)
- Transition stabilization period ( 1 basin – 2 basin)
- Dry weather
- Wet weather
- Storm flow
- WAVE OX

**Develop task list to support continuing development of operating strategies.(15 min)**

- Task Description
- Expected Result/Contingency
- By Whom
- By When

**Develop a timeline for implementing identified operating strategies. (15 min)**