

# Sedimentation and Filtration

**Instructor: Tony Goff**

**At Your Pace Online**

**1383 2<sup>nd</sup> Ave.**

**Gold Hill, OR 97525**

**877-724-6150**

Oregon water treatment and distribution Operators can satisfy 3 hours toward license renewal with this course.

This course will provide an overview of sedimentation and filtration. Students will learn about:

- Regulations - Understand the history and implications of EPA rules regulating sedimentation and filtration.
- Sedimentation - Explore the details of sedimentation and learn about particle size and density, particle charge, water velocity and temperature, how basin shape and size affect sedimentation, and much more.
- Filtration - Learn about types of filters and their specific uses along with basic filter operation and maintenance to ensure you know how to keep filters in service, and return them to service if they're non-operational.

## **Syllabus:**

<b>Sedimentation and Filtration:</b>	3h 7m
1. Sedimentation and Filtration Introduction (Video)	2m
a. This video reviews the goal of water treatment, water sources, and the multi-barrier approach.	
2. Regulations	24m
a. This video covers the SWTR, the 1998 ESWTR, and LT1ESWTR.	
3. What is Sedimentation? (Video)	2m
a. This video defines sedimentation and how it works.	
4. Sedimentation	42m
a. This section discusses particle size, density, shape, and charge and these factors affect the treatment process. Water velocity and temperature, basin characteristics, inlet, settling, sludge, and outlet zones, and additional concerns are also defined.	
5. Sedimentation (Video)	1m
a. This video briefly touches on the importance of precise calculations in	

- determining sedimentation efficiency.
6. What is Sedimentation? 17m
    - a. This section defines surface loading rate, weir overflow rate, and sludge pumping.
  7. What is Filtration? (Video) 1m
    - a. This video introduces filtration processes and types.
  8. Filtration 1h 34m
    - a. This section examines types of filters, proper filter operation, and filter maintenance.
  9. Conclusion (Video) 4m
    - a. This video details when an operator must notify the Department about water issues, and how to submit monthly reports on the operation of the facility. Then the video summarizes key points from the course.

## **Course Details:**

### **Requirements:**

Our system is offered online and so there are a few requirements in order to complete the course. Our course can be taken with a minimal system that meets all of the requirements below, but the learning experience will be best if the student's system meets the following recommendations as well.

**Required:** Internet capable device. Our course is compatible with smartphones, tablets, and traditional computers. It is not necessary that students own this device, merely that they have access to such a device.

**Required:** Internet connection.

**Recommended:** High speed internet connection. Our course uses a number of videos and therefore the experience will be better with a high speed connection.

**Required:** Up to date browser.

**Recommended:** Up to date version of Google Chrome.

### **Course Setup:**

Course completion is tracked through questions between the sections. The questions within slides do not, however, track progress. In order to mark the course as complete, students will need to answer all of the questions attached to the course.

Upon enrolling in our course, students will have access for 365 days. After this 365 day period, they may contact us to have their enrollment renewed.

Any questions, concerns, or issues that arise while taking the class can be addressed by

calling the contact number, writing to the contact email, or sending a message through the “Suggestion Box” included in the course. Any message will receive a response within one business day, though chats are usually answered within one hour.

After finishing all course content, the student will need to fill out the “Completion Questionnaire” so that their completion can be reported to the state.

### **Course Completion:**

Upon successful completion of the course, the student will be able to complete the “Mandatory Questionnaire” which gives us the necessary information to report completion to the state. The student will then have access to the certificate of completion. If applicable, AYPO will report completion to the state.

### **Refunds:**

All tuition and fees paid by the applicant shall be refunded if the applicant is rejected by the school before enrollment. All tuition and fees paid by the applicant shall be refunded if requested within three business days after the terms and conditions have been accepted (on the enrollment page). Refunds are returned within thirty business days.

After the initial three business days have elapsed, AYPO will happily refund 100% of the purchase price for any course which the student has not yet begun.

Refunds of all or some portion of the purchase price may be available in situations where the student has already started taking the course, but not yet completed it. In general, for individuals who have already completed an entire course, refunds will not be available. Our office staff may be reached at (877) 724-6150 for more information about refund requests.

### **Attendance and Dismissal:**

Students who enroll in this class are required to complete 100% of the course to receive credit. Since this class is presented online, enrolled students are not dismissed.

### **Course Content:**

At Your Pace Online is responsible for the content of this course.