

Agenda: Preliminary and Primary Treatment Fundamentals

In Partnership with Water Environment Federation



This online eLearning course is being offered in partnership with Water Environment Federation (WEF).

Summary - The Preliminary and Primary Treatment Fundamentals course reviews the need for wastewater treatment, the characteristics of wastewater, and preliminary treatment and primary treatment processes for wastewater. These four chapters are a subset of the Wastewater Treatment Fundamentals I: Liquid Treatment course.

Estimate to Complete - 17 hours

Chapter 1: Introduction to Wastewater Treatment - This chapter discusses the need for wastewater treatment, presents a brief overview of some of the pollutants in wastewater, reviews the various federal laws and regulations applicable to the permitting of water resource recovery facilities (WRRFs), describes the typical unit processes used to provide safe and acceptable treatment of wastewater, and discusses treatment and disposal alternatives for the solids removed from wastewater.

Chapter 2: Wastewater Characteristics - Effective operation and control of a water resource recovery facility (WRRF) requires that the operator possess a thorough knowledge of the composition of the influent, effluent, and internal process streams. To obtain that knowledge, the operator determines the characteristics of the raw wastewater and streams by collecting and analyzing representative samples throughout the facility. This chapter provides operators with information on wastewater characterization flow monitoring, and sampling necessary to operate the facility effectively.

Chapter 3: Preliminary Treatment of Wastewater - This chapter presents descriptions of, and operational considerations for, preliminary treatment processes. The purpose of preliminary treatment is to remove, reduce, or modify wastewater constituents in the raw influent that can cause operational problems with downstream processes or increase maintenance of downstream equipment.

Chapter 4: Primary Treatment of Wastewater - In this chapter, we turn our attention to primary treatment of wastewater, which involves using gravity and floatation to separate and

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remove readily settleable suspended solids (sludge) and readily floatable material (scum). Velocity of the wastewater is slowed, and settleable solids sink to the bottom of the tank. Floatable materials rise to the top of the tank, where they can be skimmed off and removed.

Final Assessment - Students need to answer 70% of the questions correct to pass the final assessment and receive credit for the Preliminary and Primary Treatment Fundamentals course.

PPTF: End of Course Survey (not included in est. 17 hours) - After passing the final assessment, students are directed to an end of course survey to evaluate the learning experience and provide license information to ensure the information in the LMS is correct.

Course Schedule: Preliminary and Primary Treatment Fundamentals

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Estimate to Complete - 17 hours

Module Title	Average Time to Complete
Chapter 1: Introduction to Wastewater Treatment	3 hours
Chapter 2: Wastewater Characteristics	3 hours
Chapter 3: Preliminary Treatment of Wastewater	5 hours
Chapter 4: Primary Treatment of Wastewater	6 hours
Final Assessment	4 hours
PPTF: End of Course Survey (not included in est. 17 hours)	Not applicable