Course Description Sheet

COURSE TITLE
Water Meters

COURSE DURATION
1 Hour

OVERVIEW
Reading a meter is a basic skill every water operator should master along with basic knowledge and understanding of water meters.

Water meters provide several benefits. For example, meters allow the customer to be billed for the amount of water used. They also determine the amount of water produced and the losses of water. Metering data can also be used to prevent wasting water due to ineffective and excessive use of water, and more efficient water consumption.

This course introduces meters and presents the common types of meters, how used and their purpose, history, briefly how to test and maintain, and access to meters, how to obtain a direct readout from a meter, and be acquainted with new technology and alternative methods of obtaining meter reads.

PREREQUISITES
No prior knowledge is required.

BEHAVIORAL OBJECTIVES
By the end of this course, you will be able to:

- Explain the various functions of water meters.
- Identify the locations where meters may be installed and the advantages and disadvantages of each.
- Describe the types of positive displacement meters commonly used for residential services.
- Summarize similarities and differences between types of velocity meters.
- Explain how to read straight reading and circular reading meters.
- Describe alternative meter reading methods, including remote readers, plug-in type readers, electronic meter readers, and automatic meter reading.
- Discuss meter maintenance, testing, and calibration issues

COURSE OUTLINE

Chapter	Minutes
Introduction	2
Purpose of Water Meters	5
Types of Meters	12
Meter Installation and Access	5
Meter Practices	15

Safety	5
Record Keeping	2
Water Meter Maintenance, Testing and Accuracy	7
Conclusion	2
Course Total	**55**
+ Study Exercises (TS)/Checkpoints (RV) (10% Course Total)	**5.0**
= Grand Total	**60**

AVAILABILITY

This course is offered online and is available 24 hours a day, 7 days a week, 365 days a year.

TRAINING METHODOLOGY & EVALUATION

This course is self-paced online training. Review exercises reinforce the content, and students are evaluated with a multiple-choice exam. Upon completion, students are prompted to submit a course evaluation.

REFERENCES

- Peter Annin, 2023, *Purified, How Recycled Sewage is Transforming Our Water*, Island Press

- Washington State Department of Health, Office of Drinking Water, June 2020, *Water System Design Manual*, DOH Publication 331-123.

- Washington State Department of Health, Office of Drinking Water, August 2020, *Water System Planning Guidebook,* DOH Publication 331-068

- American Water Works Association, November 2018, *Water Meters – Selection, Installation, Testing, and Maintenance – Manual of Water Supply Practices M6*, 5th Edition.

- Environmental Protection Agency, Water Sense, September 2022, *Improving Water Management Using Advanced Metering Infrastructure Data: A Guide for Facility Managers.* EPA-832-F-22-016.

- American Water Works Association,2016, *The State of Water Loss Control in Drinking Water Utilities, A White Paper from the American Water Works.*

- Washington State Department of Health, Office of Drinking Water, May 2025, *Water Use Efficiency Guidebook, Fourth Edition*, DOH Publication 331-375.

- Washington State Revised Code of Washington, 70A.125, 2003, Water Use Efficiency Requirements.

- Washington State Department of Health, Office of Drinking Water, July 2023, *Water Service Meters: An Opportunity to Focus on Residential Water Use*, DOH Publication 331-575.

- Washington State Department of Health, Office of Drinking Water, August 2009, *Water System Service Capacity in Equivalent Residential Units (ERUs),* DOH Publication 331-441.

- American Water Works Association, January 2022, *Increasing Consumer Benefits and Engagement in AMI-Based Conservation Programs, Guidebook for Practitioners,* report prepared for the American Water Works Association by the Behaviorist