

Training Evaluation Request
Oregon Environmental Services Advisory Council
Watura
District Meter Areas (DMAs)

Course title: District Meter Areas (DMAs)

Drinking Water CEUs: 1.5 h

Wastewater CEUs: 0 h

Instructor bio: **Eddy RENAUD** is an engineer specializing in drinking water systems in rural areas. After working as a consultant for several water utilities, he joined INRAE (a public scientific and technological institution) in 2004. He is currently the Deputy Director of the Research Unit "Environment, Territories in Transition, Infrastructures, Societies" in Bordeaux, France. His research focuses specifically on asset management and leakage reduction in drinking water systems.

Course description: Dividing a drinking water distribution system into District Meter Areas (DMAs) is an effective way of identifying leaks. This training course is a first step towards understanding what DMAs are, how they are set up and how this concept is used.

Learning goals:

- Preprocess data and use it to detect different types of leaks
- Describe how District Meter Areas (DMAs) are designed and created
- Define a District Meter Area (DMA)

Tracking attendance method:

The e-learning platform offers a highly interactive experience designed to engage learners at every stage. It begins with an initial test to assess knowledge and tailor the learning journey. The course includes short, focused videos interspersed with mandatory training quizzes that reinforce key concepts and ensure active participation. Students are required to watch every video entirely and to answer practice questions before advancing to the next course module. Students cannot skip course content. A final quiz at the end of each chapter evaluates overall comprehension and certifies the learner's mastery of the material. Students must obtain a minimum score of 70% for every chapter's final quiz to successfully complete the course and obtain the certificate of attendance. The platform automatically tracks each learner's learning time. The real learning time is indicated alongside the delivered credits in the course completion certificate.

Course outline: Operation of Drinking Water Distribution Systems

Initial Test		10 min
1. Introduction to District Meter Areas	1.1. Course Overview	1 min
	1.1. The Challenges of Reducing Leaks	7 min
	1.2. Chapter 1 - Fact Sheets	1 min
	Chapter final test	2 min
2. Designing District Meter Areas	2.1. The Different Designing Criteria for DMAs	6 min
	2.2. Collecting Data	7 min
	2.3. Data Preprocessing	6 min
	2.4. Cases of Anomalies	5 min
	2.5. Chapter 2 - Fact Sheets	3 min
	Chapter final test	7 min
3.Using District Meter Areas	3.1. Different Time Periods Used for Analyzing Flow Rates	5 min
	3.2. Calculating Losses	7 min
	3.3. Analyzing Flow Curves	6 min
	3.4. The Limits of District Meter Areas	4 min
	3.5. Chapter 3 - Fact Sheets	2 min
	Chapter final test	7 min
Total Learning Time		86 min
Requested Contact Hours		1.5 h