Certified Water Efficiency Professional Training Program

Overview

Program Summary

The CWEP Training Program is designed to provide attendees with an understanding of industry best practices for effective and efficient water management. Over two days, our professional instructor will guide you through the principles and practices of greatest relevance and practical value related to improving water usage and enabling sustainable programs.

At-a-Glance

- This training program covers the topics outlined in the official Body of Knowledge and, when paired with the necessary prerequisite knowledge and experience, serves as a valuable resource for obtaining the CWEP certification.
- This course is held over 2 days.
- You earn 1.6 CEU | 16 PDH | 3.2 AEE Credits for completing this program.

Other Program Highlights

- Work through practical examples to demonstrate the topics and procedures covered.
- Review the various areas of the Body of Knowledge associated with AEE's certification exam.
- Discuss how to apply what you have learned to your business and applications.
- Leave with a course workbook that will become an invaluable desk reference.

Registration

Candidates should visit the website for more information on available training courses, certification application process, exam registration, and associated fees. Visit www.aeecenter.org/training

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What You Will Learn

After completing the Certified Water Efficiency (CWEP) Training Program, candidates will have a thorough understanding of these key principles:

- Measure, verify, and evaluate water usage for a given building or facility.
- Relevant terminology used by local municipalities, and federal and state governments, as well as their policies, incentives and water specific mandates.
- Water billing for your company, client or facility, and what strategies to employ to reduce costs.
- How to compare and contrast water supply and water balancing options.
- What technologies are available to improve water efficiency.

Who Should Attend

The program is of greatest value to those undertaking or assessing water efficiency projects or individuals responsible for water supply and management for a facility or building. Obtaining AEE's CWEEP certification provides international credibility among the environmental management and sustainability communities. Attendees of this program have included existing energy engineers, energy managers, building maintenance engineers, manufacturing and facilities managers, and energy consultants.

Course Outline

- Introduction to General Water Conservation
- Policy, Standards, and Regulations
- Value of Water and Benchmarking
- Water Metering
- Water Balance & Audit Approach
- Measurement & Verification
- Water Treatment
- Domestic Plumbing Fixtures
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towers and Steam Boilers
- Pools and Other Open Water Bodies
- Irrigation
- Additional ICI (Institutional, Commercial, and Industrial) Water Uses
- Medical, Research, and Lab Equipment
- Storm Water Management and Alternative Water Sources

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Our Instructors

Our expert instructors bring decades of experience in the energy industry to the classroom. They are Subject Matter Experts who not only deliver cutting-edge knowledge but also share real-world case studies and insights.

Through interactive discussions and practical exercises, you'll gain a deeper understanding of water management principles and learn from the collective experience of your peers.

Certification Eligibility

The prerequisites to qualify for the certification process consider the diverse education and experience applicants may have. To be eligible for certification you must meet the required criteria – to know more visit https://www.aeecenter.org/cwep

Global Training Partners

For a complete list of AEE training partners visit:
Approved AEE Training Partners Worldwide | AEE® (aeecenter.org)

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Detailed Agenda

Day 1

Introduction to Water Efficiency Solutions
- Introduction to Water Efficiency
- Common Terms and Definitions
- Information Resources and References
- Units of Measure

Policy, Standards and Regulations
- Fundamental Principles
- Regulations and Exemptions
- Sustainable Water Use and Reporting

Value of Water and Benchmarking
- Water & Watershed Costs
- Water & Sewer Billing
- True Cost of Water
- Benchmarking Strategies

Water Metering
- Water distribution networks
- Common Water Meter Technologies, Measurements, and Loss Detection
- AMR and AMI Systems
- Water Management Technology Progression

Water Balance & Audit Approach
- Intent, Scope, and Approach to Water Audits
- Audit Goals, Process, and Outcomes
- Water Balance (Purpose, Development, and Applications/Use)

Measurement & Verification
- M&V Purpose and Approach
- M&V for ESPC or Other Guaranteed Savings Projects
- M&V Tools and Equipment

Water Efficiency Measures – Water Treatment
- Fundamentals of Water Chemistry
- Filtration, Ion Exchange, and Reverse Osmosis
- Diverse Water Treatment Systems
- Recommendations for Equipment & Processes

Water Efficiency Measures – Domestic Plumbing Fixtures
- Toilets & Urinals
- Bidets
- Faucets & Showerheads
- Water Efficiency Strategies
- Electronic Plumbing Controls and IoT Devices

Water Efficiency Measures – Commercial Kitchen Equipment
- Standard Equipment and Utilization Overview
- Recommendations for Equipment & Processes

Day 2

Water Efficiency Measures – Laundry Equipment
- Residential/Light Commercial Equipment and Utilization
- Commercial/Industrial Equipment and Utilization
- Recommendations for Equipment & Processes
- Water Discharge Uses and Recycle Options

Water Efficiency Measures – Cooling Towers & Steam Boilers
- Cooling Tower & Steam Boiler Process Overview
- Cycles of Concentration Concept
- Potential Cooling Tower and Steam Boiler Water Loss and Use Equations
- Cooling Tower and Steam Boiler Water Conservation Strategies

Detailed Agenda

Day 2

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- Residential/Light Commercial Equipment and Utilization
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- Cooling Tower and Steam Boiler Water Conservation Strategies

Water Efficiency Measures – Pools and Open Water Bodies

- Open Water Body Types and Utilization Overview
- Filtration Systems & Backwashing
- Evaporative Losses
- Recommendations for Equipment & Processes

Water Efficiency Measures – Irrigation Systems

- Irrigation Types and Application Overview
- Landscape Design vs Irrigation Demand
- Irrigation System Audits and Deficiencies
- Smart Irrigation Strategies
- Water Consumption and Cost Savings Calculations

Water Efficiency Measures – Additional ICI Water Uses Institutional, Commercial, and Industrial

- Water Cooled Mechanical Equipment
- Industrial Process Equipment
- Important Conversions and Water Use Calculations

Water Efficiency Measures – Medical and Research Equipment

- Open Water Body Types and Utilization Overview
- Filtration Systems & Backwashing
- Evaporative Losses
- Recommendations for Equipment & Processes
- Energy and Water Savings Calculations

Water Efficiency Measures – Storm Water Management & Alternative Water Sources

- Water Type Terminology
- Water Sources (Common & Alternative)
- Water Harvesting (Methods & Calculations)
- Local Regulations and Impervious Surface Charges
- Constructed Solutions for Mitigation
- Green Buildings

Open Forum for Q&A and Further Discussions as Time Allows

- Open for all to participate
- Review of concepts and calculations presented in the course