

ASSOCIATION OF BOARDS OF CERTIFICATION
CONTINUING EDUCATION COURSE TOPIC GUIDELINES FOR WATER LABORATORY ANALYSTS
 Effective January 1, 2005

Continuing Education Topics	Approved for Water Laboratory As Noted*
General	
Basic Electricity	✓
Basic Hydraulics	✓
Geographic Information Systems (GIS)	✓
Math	✓
Technical Writing	✓
Water Chemistry	✓
Water Microbiology	✓
Laboratory Procedures	
Collect/ Preserve/ Prepare Samples for Analysis	✓
Sample Analysis	✓
Interpreting Sample Analysis Results	✓
Lab Operation/ Maintenance	✓
Quality Assurance/ Quality Control	✓
Handling Chemicals and Wastes	✓
Laboratory Management	✓
Safety in O&M/ Personal Health and Safety	
Backhoe Operator	✓
Back Power	✓
Blood-borne Pathogens	NA
Chains/ Slings/ Wire Rope	✓
Chlorine Safety	✓
Confined Space Awareness	✓
CPR	✓
Defensive Driving	✓
Ear & Eye Protection	✓
Electrical Hazards	✓
Excavations, Competent Person	✓
Excavations, Trenching/ Shoring	✓
Fire Safety in the Workplace	✓
First Aid	✓
Hazard Communication/ Right-to-Know	✓
Lab Safety	✓
Ladder Safety	✓
Lockout/ Tagout	✓
OSHA	✓
Personal Protective Equipment	✓
Respiratory Protection	✓
Safe Handling of Materials (chemicals, etc.)	✓
Safety and Health Plans	✓
Slips/ Trips/ Falls	✓
Spill Response	✓
Traffic Control/ Work Zone Safety	✓
Workplace Safety	✓

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Operate and Maintain Equipment	
Booster Pumping Stations	✓
Chain Saw	✓
Computers	✓
Electrical Controls/ SCADA	✓
Forklift	✓
Hydraulic and Pneumatic Equipment	✓
Lift Stations	NA
Motor Control Centers	✓
Pipe, Valves, Fittings	✓
Programmable Logic Controllers (PLCs)	✓
Pumps/ Motors/ Engines	✓
Stand-by/ Auxiliary/ Support Equipment	✓
Instrumentation	✓
Chemical Feed Systems	✓
Blowers and Compressors	✓
Generators	✓
HVAC	✓
Process Equipment	✓
Water Treatment-Process/ Quality Control	
Groundwater Basics: Aquifers	✓
Well Drilling and Development	✓
Well Operation (yield, drawdown, etc.)	✓
Well Maintenance and Rehabilitation	✓
Aquifer Storage and Recovery	✓
Water Source Treatment and Characteristics	✓
Drinking Water Standards and Rules (bacti, lead, copper, etc.)	✓
Arsenic Removal	✓
Nitrate Removal	✓
Pesticide and Herbicide Reduction	✓
Taste and Odor Control	✓
Aeration	✓
Disinfection (chemistry, agents, efficacy, equipment and process control)	✓
Disinfection of Water Storage Vessels	✓
Iron and Manganese Removal (occurrence, chemistry, treatment options)	✓
Corrosion Control	✓
Chemical Storage and Handling	✓
Chemical Precipitation Softening (chemistry, treatment options, process control)	✓
Cation Exchange Softening (chemistry, treatment options, process control)	✓
Coagulation and Flocculation (chemistry, treatment options, process control)	✓
Sedimentation/ Clarification (equipment, process control)	✓
Filtration (process basics, media, equipment, process control, optimization)	✓

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Water Treatment-Process/ Quality Control (continued)	
Fluoridation (chemistry, equipment, process control)	✓
Membrane Processes: Filtration Modes (RO, MF, UF, NF, ED, etc.)	✓
Adsorption Processes (chemistry, treatment options, process control)	✓
Surface Water Treatment Challenges (and similar topics)	✓
Plant and Distribution Storage	✓
Residuals Disposal	✓
Bacteriological Sampling Procedures	✓
Sampling and Lab Analysis	✓
Zebra Mussel Control	✓
Algae Control	✓
Intake Structures	✓
Chemical Treatment	✓
Flow Measurement: Open Channel, Pipeline (equipment, calibration)	✓
Oxidation	✓
Process Optimization and Upgrade	✓
Point of Use/ Point of Entry Devices	✓
Distribution-Process/ Quality Control	
Wellhead/ Source Water Protection	✓
Groundwater Basics: Aquifers	✓
Well Drilling and Development	✓
Well Operation (yield, drawdown, etc.)	✓
Well Maintenance, Rehabilitation, and Inspection	✓
Aquifer Storage and Recovery	✓
Water Source Characteristics	✓
Drinking Water Standards and Rules (bacti, lead, copper, etc.)	✓
Distribution Systems (mains, taps, maintenance, repairs)	✓
New Main and Repair Disinfection	✓
Cross-Connection, Backflow	✓
Corrosion Control	✓
Mapping, Locating, Tracer Wire	✓
Hydrants, Valves, Exercising Programs	✓
Flushing, Pigging, and Swabbing	✓
Dechlorination	✓
Fire Flow Testing	✓
Storage (coatings, inspection, maintenance, and repair)	✓
Trenchless Construction: Pipe Bursting	✓
Metering (types, sizing, maintenance, testing, Automated Meter Reading Technology)	✓
Service Lines and Curb Box Maintenance	✓
Service Line Thawing	✓
Leak Detection/ Water Audits	✓
Chlorination	✓
Sampling and Lab Analysis	✓
Point of Use/ Point of Entry Devices	✓

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Wastewater Treatment-Process/ Quality Control	
Incoming Wastestream/ Sidestream Characteristics	NA
Screens, Grinders (equipment, process control)	NA
Grit Removal (equipment, process control, disposal)	NA
Fats, Oils and Grease Removal (equipment, process control, disposal)	NA
Sedimentation (equipment, process control)	NA
Attached Growth/ Fixed Film Systems: Trickling Filters, RBCs (equipment, process control)	NA
Suspended Growth Systems: Activated Sludge Systems, SBRs, (equipment, process control)	NA
Coupled Systems: TF/AS, TF/SC (equipment, process control)	NA
Lagoons: Facultative, Anaerobic, Aerated (function, process control)	NA
Wastewater Treatment Wetlands (function, process control)	NA
Sludge Treatment: Anaerobic, Aerobic, Thickening, Conditioning, Dewatering (equipment, process control)	NA
Biosolids Disposal/ Land Application (regulations, equipment, process control, records, monitoring)	NA
Advanced Wastewater Treatment Processes: Nutrient Removal, Ammonia Removal, Ultra-Solids Removal	NA
Alternative Technologies	NA
Sand/ Media Filters	NA
Wastewater Disinfection: Chlorination, Dechlorination, UV, Ozonation	NA
Flow Measurement: Open Channel, Pipeline (equipment, calibration)	NA
Sampling and Lab Analysis	NA
Odor Control	NA
Process Optimization and Upgrade	NA
Chemical Treatment	NA
Effluent Discharge and Reuse	NA
Wastewater Collection-Process/ Quality Control	
Sources & Characteristics	NA
Stormwater Separation	NA
Sewers & Manholes (materials, maintenance, tapping, repairs, TV, cleaning)	NA
Routine Sewer/ Manhole Inspection	NA
Trenchless Technologies, Pipe Bursting	NA
Flushing Pigging, Swabbing	NA
Corrosion Control	NA
Service Lines and Connections	NA
Infiltration/ Inflow / Exfiltration	NA
Overflows and Bypass Control	NA
Lift Stations	NA
Flow Measurement: Open Channel, Pipeline (equipment, calibration)	NA
Sampling	NA
Odor Control	NA
Industrial Contributions, Pretreatment	NA

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Administration/ Management Module	
Capacity Management O&M (CMOM)	NA
Compliance	✓
Regulations, Permits, SDWA, Public Notification, Operator Certification, CWA	✓
TMDLs, Bypass Notification	NA
Construction/ Inspection/ Design/ Build	✓
Customer Water Quality Inquiries	✓
Emergency and Security Training	✓
Energy Efficiency	✓
Federal and State Financing Programs	✓
Finance, Budget, Viability, Rates	✓
Industrial Contributions, Pretreatment	NA
Inspections/ Surveys	NA
Legal Issues for Water/ Wastewater Utilities	✓
Public Relations, Customer Relations, Shutoff, Media	✓
Planning	✓
Quality Circles, Continuous Process Improvement (CPI)	✓
Records and Reports: Consumer Confidence Reports	✓
Risk Management	✓
Sanitary Surveys	✓
Statistical Process Control Techniques	✓
Supervision, Management	✓
Surface and Groundwater Watershed Protection	✓
Telecom on Water Towers	✓
Water Conservation	✓
Personnel Development	
Conflict Management	✓
Diversity	✓
Leadership	✓
Motivational	✓
Right-to-Know	✓
Sexual Harassment	✓
Stress Management	✓
Time Management	✓

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