

**ASSOCIATION OF BOARDS OF CERTIFICATION
CONTINUING EDUCATION COURSE TOPIC GUIDELINES FOR WASTEWATER TREATMENT
OPERATORS**

Effective January 1, 2005

Continuing Education Topics	Approved for Wastewater Treatment As Noted*
General	
Basic Electricity	✓
Basic Hydraulics	✓
Geographic Information Systems (GIS)	✓
Math	✓
Technical Writing	✓
Water Chemistry	✓
Water Microbiology	✓
Safety in O&M/ Personal Health and Safety	
Backhoe Operator	✓
Back Power	✓
Blood-borne Pathogens	✓
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	✓
Operate and Maintain Equipment	
Booster Pumping Stations	NA
Chain Saw	✓
Computers	✓
Electrical Controls/ SCADA	✓

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Operate and Maintain Equipment (continued)	
Forklift	✓
Hydraulic and Pneumatic Equipment	✓
Lift Stations	✓
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	NA
Well Drilling and Development	NA
Well Operation (yield, drawdown, etc.)	NA
Well Maintenance and Rehabilitation	NA
Aquifer Storage and Recovery	NA
Water Source Treatment and Characteristics	NA
Drinking Water Standards and Rules (bacti, lead, copper, etc.)	NA
Arsenic Removal	NA
Nitrate Removal	NA
Pesticide and Herbicide Reduction	NA
Taste and Odor Control	NA
Aeration	NA
Disinfection (chemistry, agents, efficacy, equipment and process control)	NA
Disinfection of Water Storage Vessels	NA
Iron and Manganese Removal (occurrence, chemistry, treatment options)	NA
Corrosion Control	NA
Chemical Storage and Handling	NA
Chemical Precipitation Softening (chemistry, treatment options, process control)	NA
Cation Exchange Softening (chemistry, treatment options, process control)	NA
Coagulation and Flocculation (chemistry, treatment options, process control)	NA
Sedimentation/ Clarification (equipment, process control)	NA
Filtration (process basics, media, equipment, process control, optimization)	NA

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

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Distribution-Process/ Quality Control (continued)	
Metering (types, sizing, maintenance, testing, Automated Meter Reading Technology)	NA
Service Lines and Curb Box Maintenance	NA
Service Line Thawing	NA
Leak Detection/ Water Audits	NA
Chlorination	NA
Sampling and Lab Analysis	NA
Point of Use/ Point of Entry Devices	NA
Wastewater Treatment-Process/ Quality Control	
Incoming Wastestream/ Sidestream Characteristics	✓
Screens, Grinders (equipment, process control)	✓
Grit Removal (equipment, process control, disposal)	✓
Fats, Oils and Grease Removal (equipment, process control, disposal)	✓
Sedimentation (equipment, process control)	✓
Attached Growth/ Fixed Film Systems: Trickling Filters, RBCs (equipment, process control)	✓
Suspended Growth Systems: Activated Sludge Systems, SBRs, (equipment, process control)	✓
Coupled Systems: TF/AS, TF/SC (equipment, process control)	✓
Lagoons: Facultative, Anaerobic, Aerated (function, process control)	✓
Wastewater Treatment Wetlands (function, process control)	✓
Sludge Treatment: Anaerobic, Aerobic, Thickening, Conditioning, Dewatering (equipment, process control)	✓
Biosolids Disposal/ Land Application (regulations, equipment, process control, records, monitoring)	✓
Advanced Wastewater Treatment Processes: Nutrient Removal, Ammonia Removal, Ultra-Solids Removal	✓
Alternative Technologies	✓
Sand/ Media Filters	✓
Wastewater Disinfection: Chlorination, Dechlorination, UV, Ozonation	✓
Flow Measurement: Open Channel, Pipeline (equipment, calibration)	✓
Sampling and Lab Analysis	✓
Odor Control	✓
Process Optimization and Upgrade	✓
Chemical Treatment	✓
Effluent Discharge and Reuse	✓

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Wastewater Collection-Process/ Quality Control	
Sources & Characteristics	✓
Stormwater Separation	✓
Sewers & Manholes (materials, maintenance, tapping, repairs, TV, cleaning)	✓
Routine Sewer/ Manhole Inspection	✓
Trenchless Technologies, Pipe Bursting	✓
Flushing Pigging, Swabbing	✓
Corrosion Control	✓
Service Lines and Connections	✓
Infiltration/ Inflow / Exfiltration	✓
Overflows and Bypass Control	✓
Lift Stations	✓
Flow Measurement: Open Channel, Pipeline (equipment, calibration)	✓
Sampling	✓
Odor Control	✓
Industrial Contributions, Pretreatment	✓
Administration/ Management Module	
Capacity Management O&M (CMOM)	✓
Compliance	✓
Regulations, Permits, SDWA, Public Notification, Operator Certification, CWA	✓
TMDLs, Bypass Notification	✓
Construction/ Inspection/ Design/ Build	✓
Customer Water Quality Inquiries	NA
Emergency and Security Training	✓
Energy Efficiency	✓
Federal and State Financing Programs	✓
Finance, Budget, Viability, Rates	✓
Industrial Contributions, Pretreatment	✓
Inspections/ Surveys	✓
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	NA
Statistical Process Control Techniques	✓
Supervision, Management	✓
Surface and Groundwater Watershed Protection	✓
Telecom on Water Towers	NA
Water Conservation	NA

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Personnel Development	
Conflict Management	✓
Diversity	✓
Leadership	✓
Motivational	✓
Right-to-Know	✓
Sexual Harassment	✓
Stress Management	✓
Time Management	✓

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