

Need To Know Criteria

Water Exam				
Class A	Class B	Class C	Class D	Small Systems
Hydraulics				
• Pressure	x	x	x	x
• Headloss	x	x	x	x
• Velocity and flow in pipes and open channels	x	x		
• Knowledge of weirs and using them for flow measurement	x	x		
• Knowledge of backflow prevention devices	x	x	x	x
Administration				
• Budgeting	x	x	x	x
• Public relations	x			
• Emergency response	x	x	x	x
• Vulnerability assessment	x	x	x	x
• Supervision	x	x		
• Water quality reporting	x	x	x	x
• Housekeeping	x	x	x	x
Math				
• Ability to calculate tank volumes, draw down and detention time	x	x	x	x
• Ability to calculate chemical dosages and daily use of chemicals	x	x	x	
• Ability to calculate treatment costs	x	x	x	x
• Ability to calculate consumption from meter readings	x	x	x	x
• Ability to calculate headloss	x	x	x	x
• Ability to calculate horsepower	x	x		
• Ability to calculate pumping rates	x	x	x	x
• Ability to calculate dilutions	x	x	x	
• Ability to calculate draw down and recovery in wells	x	x	x	x
• Ability to calculate loading rates	x	x		
Laboratory				
• Interpretation of lab results	x	x	x	x
• Temperature testing	x	x	x	x
• Glassware	x	x	x	x
• Chlorine residual testing	x	x	x	x
• Ozone residual testing	x	x	x	x
• Chlorine dioxide residual testing	x	x	x	
• Jar Testing	x	x		
• Hardness testing	x	x	x	x
• Alkalinity testing	x	x		
• pH testing	x	x		
• Turbidity testing	x	x		
• Fluoride testing	x	x	x	
• Serial dilutions	x	x		
• Iron testing	x	x	x	
• Manganese testing	x	x	x	
• Sampling procedures for bacterial testing	x	x	x	
• QA/QC and instrument calibration	x	x	x	x
• Streaming Current Testing	x	x		
• Zeta testing	x	x		
Basic Science				
• Chemical Formulae and Reactions	x	x		
• Concentrations – molarity and normality	x	x		
• Basic microbiology	x	x		
• Oxygen saturation	x	x		