

Master Well Driller – General Licensing Exam Study Topics

Terms-to-know/Vocabulary

- Confined/unconfined aquifers
- Artesian aquifer
- Static water level
- Pumping water level
- Specific capacity
- Devices used to measure water levels
- Cone of depression
- Potentiometric surface
- Drawdown
- Recovery
- Maximum yield
- Hydrologic cycle
- A spring
- Process of developing a water well
- Water mining
- Groundwater recharge
- Annular velocity
- pH
- Types of wells
- Fishing
- Plume
- Universal solvent
- Drilling methods and the corresponding equipment or term
- Quick sand
- Principal earth augers
- Continuous flow return method
- Methods to install a well screen
- Sources of water in rocks
- Lost circulation problem
- Artificial gravel-packing
- Turbidity
- Removal of air rotary drilled cuttings
- Formation permeability
- Location between pollutant and well
- Porosity
- Viscosity
- Two centrifugal pumps used in a series and parallel

- Air gaps
- Cavitation
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Calculations/Conversions

- Maximum yield
- Yield
- Volume of a well's annular space formula
- Entrance velocity of water into a well screen
- Air measurement (Volume & Pressure)
- Air pressure needed to lift water in a well (psi per ft of lift)
- Grains per gallon to parts per million

State Regulations

- Well construction permit
- Hydrogeologic areas 1-5
- Well permit
- Abandonment
- Casing
- Grouting
- Abandoned well report
- Screen
- Emergency well permit
- Well completion report
- "Miss Utility"
- Well log information

Chemistry

- Salt water intrusion
- Nitrate Nitrogen
- Controls of groundwater quality
- Hydrogen sulfide
- Methemoglobinemia (blue babies)
- Types of disinfectants
- Ion exchange
- Total Dissolved Solids (TDS)
- Regeneration of a filter
- Types of filters
- Bacterial treatment with polyphosphates
- Aeration

- Free Chlorine Residual
- Coliform bacteria
- Zeolite Softening

Electricity

- Voltage
- Ampacity
- Phase
- Frequency
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Safety

- Entering a hazardous waste site
- Eye protection
- Clothing
- Respirators
- Effects of exposure to hazardous vapors and gases
- Causes of electrocution
- Acetylene torches
- Hearing protection by MOSHA