

Common Confusions with MRBCA

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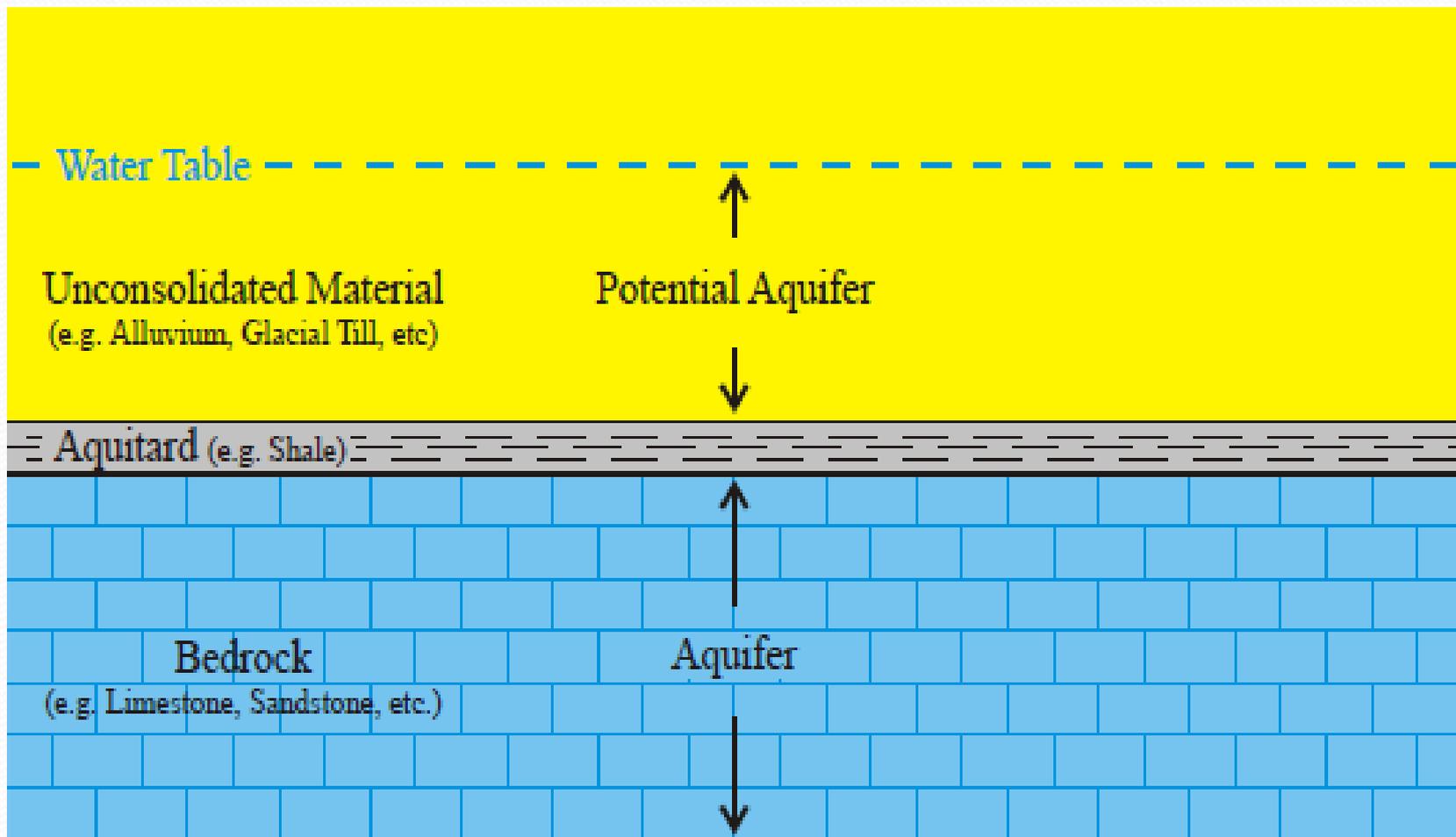


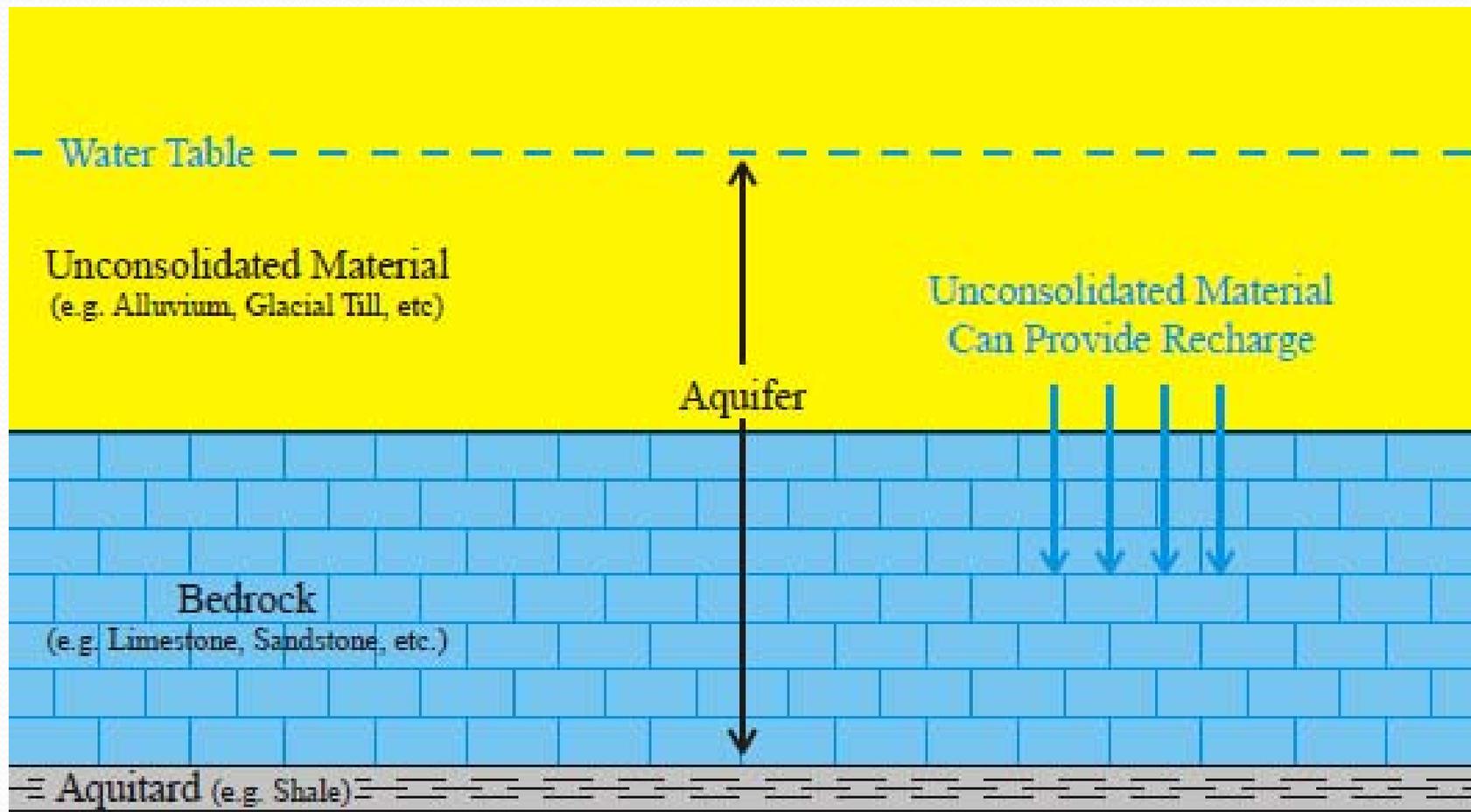
APPENDIX D CONVERSION FACTOR ERRATA NOTICE

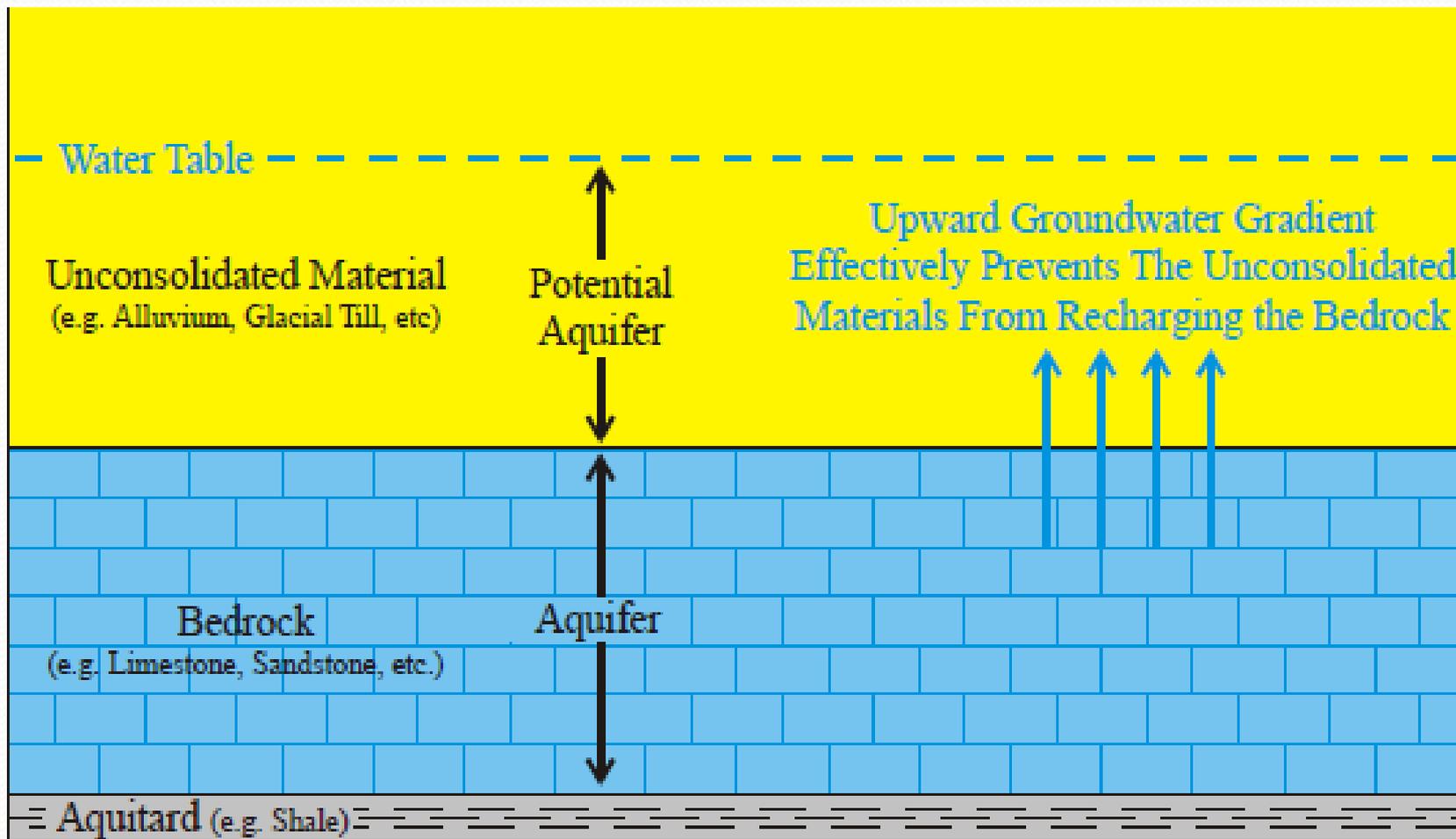
- Issue Date: November 6, 2009
- Applicability: Errata Notice applicable to Appendix D, A Method for Determining if Water Bearing Unit Should be Considered an Aquifer, of the January 2004, Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks guidance document.
- In the January 2004 version of Appendix D, an erroneous conversion factor appeared in the second paragraph on page D-3, specifically, “To convert a hydraulic conductivity value measured in gpd/ft² to cm/sec, multiply it by 7.75×10^{-5} .” The 7.75×10^{-5} conversion factor is incorrect. Use of the incorrect conversion factor carried into the examples given in Appendix D.
- The correct conversion factor, which has been incorporated into an October 22, 2009, update of Appendix D, is 4.72×10^{-5} . The examples have also been corrected.

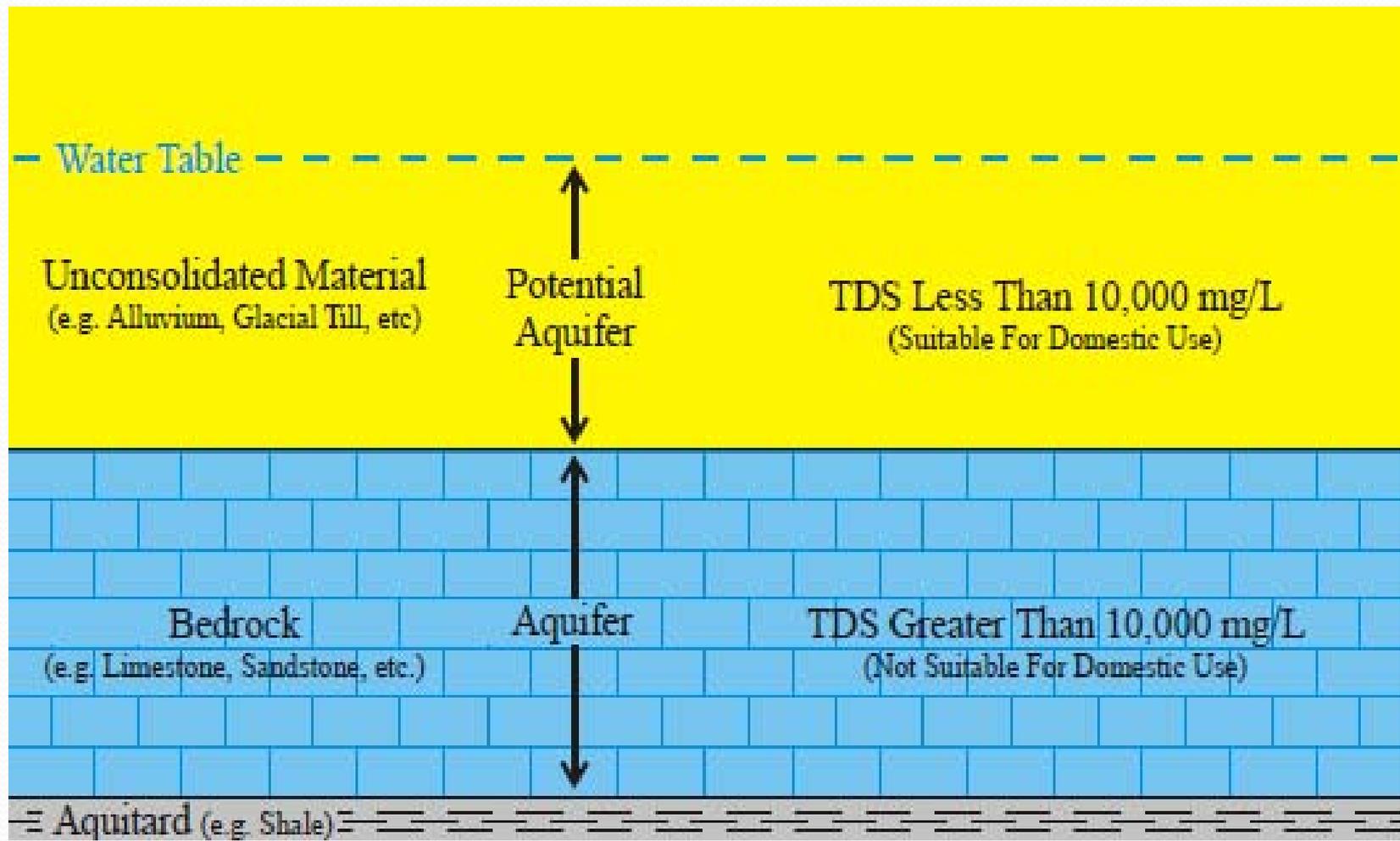


When should Appendix D of the MRBCA guidance be utilized to determine if unconsolidated materials should be considered an aquifer?









Dermal Contact Pathway

- Actually two pathways
 - Long term use in homes for showers, etc.
 - Included in with domestic use of groundwater target levels
 - Short term contact at seeps, springs, agriculture wells, etc.
 - Dermal contact with groundwater target levels

Old Data – What to do?

- Soil Data

- Cannot be ignored.
- Don't forget closure data and other investigations.
- Utilize unless replaced or invalidated by new release
- If one sample per boring can't be ignored if saturated
- Convert to dry weight if necessary

Old Data – What to do? (cont.)

- Groundwater Data
 - Cannot be ignored
 - Make sure wells are approved by Wellhead
 - Don't use data from before and after remediation activities that changed groundwater movement or concentrations.

Groundwater Plume Stability

- Use a method of evaluation that is appropriate for the data collected
 - Visual method
 - Statistical methods – individual well evaluation
 - Mann-Kendall
 - Linear regression
 - Statistical method – overall plume evaluation
 - Ricker method
 - Graphical methods

Groundwater Plume Stability

- Something else?
 - Get pre-approval for new method
 - Know the requirements and limitations of the method
 - Provide software, equations, spreadsheets, etc. to Department

Soil Vapor Sampling Protocol

- Section C.6.2 – unit inconsistency
 - Utilize 100 micrograms per liter for tracer compound
- Use of gaseous tracers
 - Protocol requires tracer analysis by laboratory

Soil Vapor Data

- Once you exceed the target levels for the site, further work is needed
- Protocol does not address this issue
- Taking another sample that does not fail does not replace one that fails
- Research into other states has not provided a solution
- Looking for peer reviewed document



Questions?