



Aquifer Testing Workshop

March 26, 2025, Las Vegas Nevada

8:30 a.m. – 10:15 a.m.

- Introduction and overview of aquifer testing
- Effect of real wells on observed changes.
- Review theory of slug testing, Present methods of analyzing overdamped and underdamped slug tests.

10:15 a.m. – 10:30 a.m. Break

10:30 a.m. - 12:15 p.m.

- CLASS EXERCISE—Analyze example overdamped and underdamped slug tests.
- Compare small-scale pumping test and slug test results. Opportunistically interpret recovery data in low-permeability rocks.
- Review Cooper-Jacob approximation of Theis solution, introduce workbook solution, and extend Cooper-Jacob to analysis of recovery data.
- Introduce Jacob-Lohman analysis of constant drawdown.

12:15 p.m. - 1:00 p.m. Lunch

1:00 p.m. - 2:15 p.m.

- CLASS EXERCISE—Analyze single-well drawdown and recovery with Cooper-Jacob and Cooper-Jacob recovery approaches.
- Introduce step tests for characterizing well performance and estimating transmissivity.
- CLASS EXERCISE—Analyze step test.
- Demonstrate that transmissivity should be reported. Discuss complications from thermal expansion. Explain effects of turbulent losses in aquifer on interpretation of drawdowns in open boreholes.

2:15 p.m. – 2:30 p.m. Break

2:30 p.m. - 4:30 p.m.

- Present interpretative approach for multiple-well aquifer test. Detecting smaller drawdowns with water-level models and expanding investigated volumes. Demonstrate effects of well and piezometer design on water-level monitoring.
- Integrating aquifer-test results with simulated hydraulic conductivities in groundwater-flow models.
- Show robustness of relation between specific capacity & T. Create KML file from NDWR well-log data with hyperlink to PDF of each posted well log.
- Review guidelines for documenting aquifer-test results and examples.

4:30 p.m. Adjourn