SOFTWARE REVIEW

AQTESOLV 3.01

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AQTESOLV® by HydroSOLVE Inc. is software designed to calculate hydraulic conductivity, storativity, and other aquifer properties from data sets collected during slug and aquifer (pumping) tests.

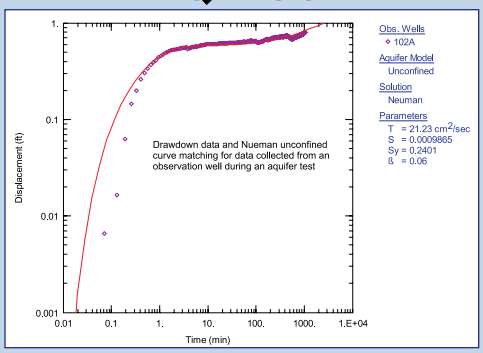
AQTESOLV is user-friendly and can be easily mastered using the tutorial and the help file. The Slug Test and Pumping Test wizards do a good job of walking the user through the data input process. Pictures on each input screen show what each variable represents.

The software can import text files generated by commonly used pressure transducers. Data also can be manually entered or pasted from a spreadsheet. It is easy to change the input values once they are entered, and to switch between English and SI units. After importing, the raw data can be manipulated using mathematical functions. Hydraulic head data can be converted to drawdown data, for example.

Once the data are entered, the software offers a variety of solutions, but user knowledge is important. AQTESOLV gives little guidance on selecting the appropriate solution for the data and hydrogeologic setting, and refers the user to the relevant literature for details on each solution. Users must also know how to correctly display the data (e.g., on linear or log scales), and how to transform raw data into the form used by each solution. The software provides an automated matching feature, but the match is usually poor, and manual fitting of the solution lines to the data is recommended.

Incorporating output from AQTESOLV into a presentation or report is functional, but not fancy (see accompanying figure). The graphed data, best fit line, and calculated parameters can be sent to a printer or exported as a Windows metafile.

Review of **AQTESOLV**



Ease of Use:
GUI:
Output/Plotting:
Documentation:
Speed:
OVERALL RATING:

Application
Design and Analysis of Aquifer Tests

Best Features
The Pumping and Slug Test Wizards

Worst Feature
Output graphic options

Rating System: Excellent Poor

igwmc International Ground Water Modeling Center
Department of Geology and Geological Engineering

Overall, the software is easy to use, offers a variety of solutions, creates presentation-quality output, and saves time when compared to performing the analysis by hand.

AQTESOLV can be downloaded at www.aqtesolv.com. Prices vary from $500 to $1,500, depending on type of license, version, and commercial or academic application.

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Ground-water, surface-water, and water-chemistry data, Black Mesa area, northeastern Arizona--2004-05, by Margot Truini and J.P. Macy.
http://pubs.usgs.gov/of/2006/1058/

Hydrogeologic investigation of the Detrital, Hualapai, and Sacramento Valleys of northwestern Arizona: A project of the Rural Watershed Initiative, by D.W. Anning, M.E. Flynn, and Margot Truini.
http://pubs.usgs.gov/fs/2006/3008/

Evaluation of ground-water flow model for Northern Utah Valley, Utah, updated to conditions through 2002, by Susan Thiros.
http://pubs.usgs.gov/sir/2006/5064/

Hydraulic and geomorphic monitoring of experimental bridge scour mitigation at selected bridges in Utah, 2003-05, by T.A. Kenney and T.S. McKinney.
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