AquaChem

**Magnus Skold — Colorado School of Mines.**

Software Review courtesy of International Ground Water Modeling Center and Colorado School of Mines.

AquaChem, produced by Waterloo Hydrogeologic, is a water quality data management program that allows the user to plot data, perform common statistical analyses, and create simple reports. AquaChem is compatible with Microsoft (MS) programs: the database created by AquaChem can be opened and modified in MS Access and data can be imported to AquaChem from text and MS Excel files.

AquaChem’s most useful feature is its ability to plot data quickly. Maps can be created that display water quality data in diagrams using coordinates for sample locations. AutoCAD or common graphics files can be used as a base map. Also, the chemistry of water from different wells or groups of wells can be compared in formats such as ternary, Piper, and Stiff diagrams. AquaChem can produce saturation indices using a built-in basic version of the USGS PHREEQC geochemical model, and also can facilitate constructing data files for use in the full version of PHREEQC (not included).

Statistical tools include trend analysis (Mann-Kendall, linear), normality tests, and evaluation of correlation between parameters. Although database management and report preparation may be performed as easily in MS Excel or Access, the statistical tools in AquaChem and the ease and speed of creating aquatic chemistry diagrams allow users to quickly analyze and present data.

AquaChem is not a substitute for advanced geochemical modeling programs, but it is a useful tool for interpreting data and identifying trends in the data.

AquaChem is available from Waterloo Hydrogeologic (www.waterloohydrogeologic.com) and IGWMC (typhoon.mines.edu/software/igwmcsoft/) for $790 for a single license.

**Review of AquaChem**

**Ease of Use:**

- **GUI:**
  - Excellent

**Output/Plotting:**

- Easily create various types of water chemistry plots.

**Documentation:**

- Easily create various types of water chemistry plots.

**Speed:**

- Excellent

**OVERALL RATING:**

- Excellent

**Rating System:**

- Excellent

- Poor

- Average

**Application**

- Manage, present, and analyze chemical water samples.

**Best Features**

- Easily create various types of water chemistry plots.

**Worst Feature**

- Reports can be more easily prepared in a spreadsheet or word processor.

---

**Hydrology and Water Resources**

**University of Arizona**

Are you ready to take your study of water to the next level?

The University of Arizona Hydrology and Water Resources Department is actively seeking applicants for the Academic Year 2007-2008. Come study with an outstanding faculty of scientists and engineers to gain a whole new perspective on the field of hydrology and water resources.

Competitive student assistantships and scholarships are available. Are you a prospective student and ready for an on-campus visit? Plan to attend our annual student research symposium and recruitment event, El Dia del Agua, on Thursday, March 1, 2007.

- Learn more at www.hwr.arizona.edu
- Contact us at 520-621-3131
- Write to us at admissions@hwr.arizona.edu
- Apply online at www.hwr.arizona.edu/apply

Come study with the original.

Come study with the best.

**Hydrology and Water Resources**

**University of Arizona**

The University of Arizona -- EEO/AA - M/W/D/V

---

**Daniel B. Stephens & Associates, Inc.**

- Water resource management and planning
- Groundwater resources assessments
- Water supply development
- Groundwater modeling
- Water rights
- Surface water
- Hydrologic testing and research laboratory
- Database/GIS
- Specialized analyses

Albuquerque • Los Alamos
Santa Barbara • Austin • Dallas • Lubbock
1-800-933-3105
www.dbstephens.com

September/October 2006 • Southwest Hydrology • 41