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Tips & Tricks

Product News

HydroGeo Analyst – Release v.3.0 is Now Available!

Highlights of version 3.0...

- **NEW** - Create 3D plumes with volumetric estimations
- **NEW** - Cross tab queries and reports
- **NEW** - Lab quality assessment
- **NEW** - Time series charting
- **NEW** - User access level management
- **NEW** – Tabular summary results on Map Manager
- **...and so much more!**



From Data Discovery to Delivery!

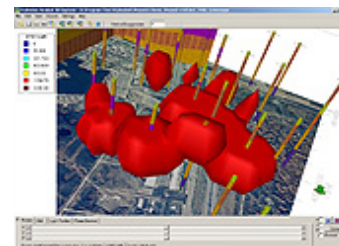
[Download your demo today!](#)

What's New in HydroGeo Analyst 3.0!

In addition to a number of program improvements, we have also added some incredible new features to the program, making HydroGeo Analyst even easier to use for your data management, analysis, and visualization needs. **Our new features include:**

HGA 3D-Explorer

- 3D Interpolation of a plume data source
 - Specify grid dimensions and extents, min and max values.
 - Select interpolation method: Kriging or Inverse Distance
 - Generate static or transient plumes, for one or more contaminants
- 3D Explorer: Display Plumes (Static and Transient) using Isosurface, Color map, or and/or Isoline Map:
 - **Isosurface:**
 - color from palette, show borders, define isosurface value
 - display volume estimation based on the isosurface value
 - **Color maps**
 - select from planar slices: Horizontal, or YZ, XZ planes, specify cut-off limits, color from palette
 - display concentration color map along a cross section line
 - **Isolines**
 - specify color fill between lines, line properties, color lines from palette, line style and thickness, automatic contour intervals or custom values

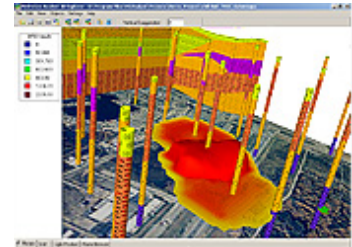
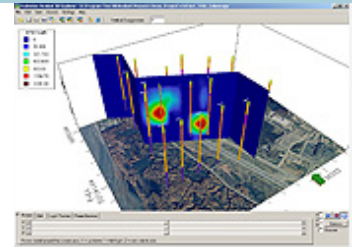


» [How to Import Older HydroGeo Analyst Projects into HydroGeo Analyst 3.0!](#)

 [Printer Friendly Version](#)

(user defined contour values), and Label properties

- **Plume Browser:**
 - provides the tools for a preliminary assessment of your plume:
 - Navigate the plume using color maps and isosurfaces.
 - Animate the color map slices as they move through the plume, from side to side, or bottom to top
 - Animate the isosurface values, from low to high values, for any point in time
 - Save the desired map or isosurface to the project, for further modifications
- Save time animation to . AVI file.
- *and more...*



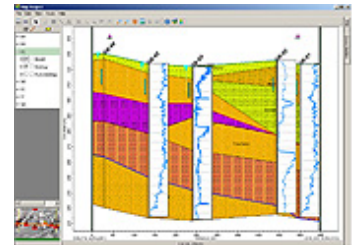
GIS Map Manager

- Add or remove wells from existing cross-sections
- Display summary results on map, in a tabular format



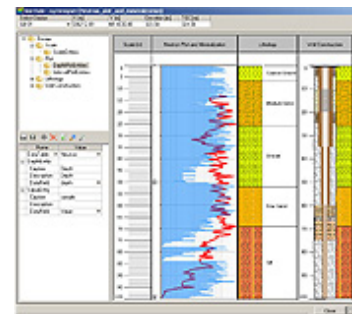
Cross-Section Editor

- Create new annotation layers (text, line, polygon); this allows adding text labels, shapes, or lines that can represent faults
- Improved data management for cross-section interpretations
 - Interpretations are saved to the database
 - Interpretation results are now linked to the stations that were selected for the cross-section; these stations, along with their interval data, are saved to the database
 - Interpretation results, and the wells and corresponding interval data, can be retrieved later using the Query Builder
 - Display borehole log plots directly on cross-sections (e. g. display Geophysical plots on the cross-section, to assist in the interpretation)



Borehole Log Plotter

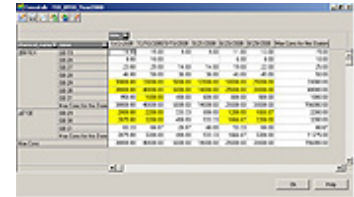
- Print borehole log plots to a user-defined scale, when a report is generated
- Use queries as data sources for depth, interval, or plot columns; providing for flexible data sources
- Allow zooming into any specified interval of a BHL P
- Added BHL P designs (templates) that are widely used around the world;
 - US Army Corps of Engineers
 - Standard Environmental Monitoring Well
 - Geophysical / Water Supply
 - Geotechnical Drilling Log
 - Ontario MOE Record of Borehole



Database Management

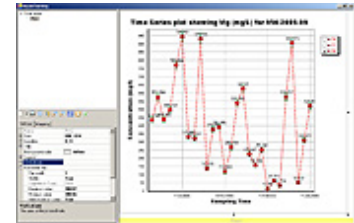
Crosstab Queries & Reports

- Generate advanced crosstab queries, using fields from a data query, or calculated fields
- Export crosstab query to a report or export to HTML and MS Excel™



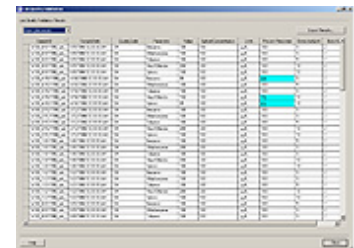
Time Series Charting

- Create Time Series X-Y plots based on data queries
- Add best fit, trend, formula, or statistical lines to the plot
- Display non-detect, uncertainty, or detection limits on the plot, as lines or symbols
- Display one or more water quality standard values, as a line or symbol, for quick detection of samples that exceed the standards



Quality Control (Lab quality assessment)

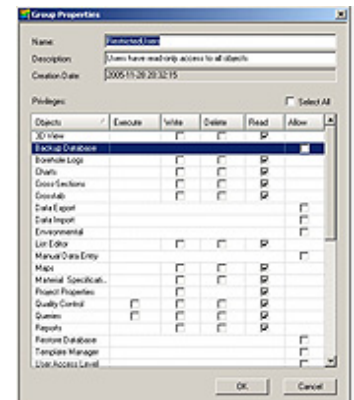
- Analyze Duplicate, Spiked and Blank samples
 - Compare Relative Percent Difference and Coefficient of Variation for Duplicate samples
 - Analyze Percent Recovery for Spiked samples
 - Compare Blank samples to method detection limits
- Execute a Quality Analysis on a selected dataset
- Display and retrieve assessment results noting that, records not meeting assessment criteria will be highlighted with user-defined colors for each QC check



Project Management

User Access Management

- HGA now has two levels of user access management:
 - Application Level - used to control permissions to features such as creating new projects and deleting existing ones; and
 - Project level - used to control access to individual projects and the various modules; eg. Data access, maps, queries, BHL, Template Manager, etc.
- Create and manage user groups (i.e. create, edit, delete, user groups, and add, remove, edit, users in to existing user groups)



For more information,
[download the HydroGeo Analyst 3.0 Flyer!](#)
(PDF 130 KB)



For more information or to order a monitoring solution bundle today, please contact us via phone at +1-519-746-1798, or via email at sws-sales@slb.com

Website: <http://www.waterloohydrogeologic.com>

Phone: (519) 746-1798

Consulting Services News

Waterloo Hydrogeologic Exhibiting at Workshops & Conferences

Waterloo Hydrogeologic will be exhibiting our services at a number of upcoming conferences and workshops throughout Canada and USA.

Our hydrogeologists and engineers will be attending these events and we would like to meet you and demonstrate our advanced monitoring service, software tools and discuss our full suite of services.

Upcoming Event:

- **NGWA 2006 Ground Water Summit**
San Antonio, Texas
April 22-27
For more information, [click here](#)



[Learn more about WHI's Consulting Services on the WHI website!](#)

If you are not able to meet us and would like to learn more about our services or expertise, please feel free to contact us. Project and service information is also accessible on our web site at: www.waterloohydrogeologic.com/consulting/consulting_services.htm

[waterloohydrogeologic.com/consulting/consulting_services.htm](http://www.waterloohydrogeologic.com/consulting/consulting_services.htm)

Phone: (519) 746-1798



Training News

WHI's Line-Up of Environmental & Groundwater Modeling Courses!

The 2005 Waterloo Hydrogeologic Open Enrollment schedule has been set. In response to comments from groundwater professionals who have taken our Groundwater Modeling Courses in the past, and from those who would like to attend courses in the future, WHI has combined the strengths of our previous Groundwater Modeling, Advanced Groundwater Modeling, and Model Calibration courses into one [Applied Groundwater Flow & Contaminant Transport Modeling](#) course. This course includes updated lecture material, as well as new hands-on laboratories to support the new course material.

WHI has also created a new short course entitled [GIS Data Management for Groundwater Modelers](#), which teaches the theory and hands-on application of GIS data integration and interpolation to support groundwater modeling efforts, as well as 3-dimensional visualization of modeling results in Visual MODFLOW, HydroGeo Analyst, and GIS environments.

Click on the titles below and see which courses are appropriate for you!

- » [Applied Groundwater Flow & Contaminant Transport Modeling](#) - NEW
- » [Groundwater Contamination & Remediation](#) - UPDATED
- » [Finite Element Groundwater Modeling](#) - UPDATED
- » [Aquifer Test Analysis](#) - NEW
- » [Unsaturated Zone Modeling and Evaluation of Landfill Impacts](#) - UPDATED
- » [The Human Health Risk Assessment Course](#) - NEW
- » [Water Quality Data Management & Modeling](#) - UPDATED
- » [Regulatory Review of Hydrogeology Studies](#) - UPDATED
- » [Making Sense of Environmental Data with HydroGeo Analyst](#) - NEW

Who Can Benefit?

- » Experienced hydrogeologists with no prior groundwater modeling experience.
- » Regulators who review modeling reports.
- » Managers who want to understand what the modelers are doing.
- » Experienced modelers who want to enhance their skills.




- » Students who want to acquire new skills.
- » Lawyers who want to understand some of the technical issues.
- » Industry professionals who want to understand more about what their consultants are telling them.

For further details on any of these courses, please visit our Training Website at: www.waterloohydrogeologic.com/training/training.htm

Or contact Miln Harvey, WHI Training Manager, at (519) 746-1798 x233.

Can't make it to one of our Open Enrollment Courses?

Call us about our [On-Site Custom Courses](#) designed to suit your specific needs!

<p>APPLIED GROUNDWATER FLOW & CONTAMINANT TRANSPORT MODELING </p> <p>Theory and Hands-on Applications using MODFLOW-2000, MODPATH, MT3D & WinPEST</p> <p>Simple to complex applications of groundwater flow and contaminant transport models are covered in this 4-day hands-on course.</p> <p>Course Objectives and Benefits</p> <ul style="list-style-type: none"> • Apply Visual MODFLOW Pro to 3D groundwater flow and contaminant transport projects. • Use MODFLOW-2000 to develop several groundwater flow models. • Calibrate your groundwater models to observed field data. • Use MODPATH particle tracking features to determine preferential flow paths and delineate capture zones. • Use ZoneBudget to assess subregional water budgets within your groundwater model. • Simulate 3D contaminant transport using RT3D, MT3DMS & MT3D99. • Use WinPEST to improve model calibration and understand model uncertainty. <p>For more details about this course, visit the course web page.</p>	<p>Vancouver, British Columbia, Canada March 7-10, 2006</p> <p>Sacramento, California May 23-26, 2006</p> <p>Waterloo, Ontario, Canada May 16-19, 2006</p> <p>Toluca, Mexico May 16-19, 2006</p> <p>Rome, Italy June 6-9, 2006</p> <p>-</p> <p>-</p> <p>Register Now</p>
<p>AQUIFER TEST ANALYSIS </p> <p>Principles of Pumping Test Design and Techniques for Data Analysis</p> <p>A wide variety of techniques can be applied to analyzing aquifer tests. This course covers the theory behind the techniques and provides an opportunity to obtain hands-on experience in analyzing aquifer test data collected from a variety of conditions.</p> <p>For more details about this course, visit the course web page.</p>	<p>Waterloo, Ontario, Canada Feb 1-2, 2006</p> <p>Waterloo, Ontario, Canada July 12-13, 2006</p> <p>Register Now</p>
<p>WATER QUALITY DATA MANAGEMENT & MODELING </p> <p>Applications using AquaChem and USGS PHREEQC</p> <p>The large quantity and range of environmental groundwater data types presents a challenge to professionals who wish to develop a comprehensive interpretation of a suite of data. This course provides hands-on experience in temporal and spatial data interpretation, including the use of convenient computer software for organizing and plotting the data.</p> <p>For more information about this course, visit the course web page.</p>	<p>Waterloo, Ontario, Canada Feb. 7-9, 2006</p> <p>-</p> <p>Register Now</p>

MODEL CALIBRATION AND PREDICTIVE ANALYSIS USING PEST, VISUAL MODFLOW & FEFLOW



This 5-day course consists of 4 days of Inverse Modeling using PEST and 1 day of Applied Inverse Modeling using either Visual MODFLOW or FEFLOW. The lectures focus on the theoretical fundamentals of model calibration, and the exercises focus on the practical aspects of inverse modeling for a wide range of hydrogeologic scenarios using WinPEST.

For more details about this course, [download the course PDF](#).

[Freising, Germany](#)
[March 6-10, 2006](#)

[Register Now](#)

REGULATORY REVIEW OF HYDROGEOLOGY STUDIES



Approaches and Insights for Reviewing Modeling Reports

The overall objective of this course is to give regulators a greater understanding of how models work, and what to look for when reviewing a modeling report.

For more information about this course, [visit the course web page](#).

[Waterloo, Ontario,
Canada](#)
[March 21-24, 2006](#)

[Register Now](#)

MAKING SENSE OF ENVIRONMENTAL DATA WITH HYDROGEO ANALYST



Understanding Data Sources, Data Analysis and Visualization

This 3-day hands-on course presents an introduction to the management and analysis of environmental data for HydroGeo Analyst users.

For more information about this course, [visit the course web page](#).

[Waterloo, Ontario,
Canada](#)
[March 28-30, 2006](#)

[Delft, Netherlands](#)
[June 6-9, 2006](#)

(June 9th - Optional Day
of Visual MODFLOW)

[Register Now](#)

FINITE ELEMENT GROUNDWATER MODELING



Advanced Applications for Saturated/Unsaturated Flow & Transport, Density-Dependent Flow, and Heat Transport

This 4-day hands-on course includes advanced applications of groundwater flow and contaminant transport models using the Finite Element method. This course provides a more complete understanding of the use and applicability of finite elements in groundwater modeling, and includes such topics as groundwater flow and transport modeling, principles of unsaturated flow, fracture flow modeling, thermal transport, and density-dependent flow modeling. This course is ideally suited for groundwater modelers who wish to advance their modeling knowledge, and apply finite elements—using FEFLOW—to more complex modeling designs.

For more information about this course, [visit the course web page](#).

[Waterloo, Ontario,
Canada](#)
[April, 4-7, 2006](#)

[Register Now](#)

 [Get our full 2006 training schedule!](#)

 [Request your free 2006 Training Course Schedule Catalog!](#)

For more information about our course offerings, visit our website or contact us today:

Website: www.waterloohydrogeologic.com/training/training.htm

Email: sws-training@slb.com

Phone: (519) 746-1798

Tips & Tricks

How to Import Older HydroGeo Analyst Projects into HydroGeo Analyst 3.0!

With the highly anticipated release of [HydroGeo Analyst](#) version 3.0 we wanted to review the process of updating old projects created in previous versions of HydroGeo Analyst.

HydroGeo Analyst v.3.0 is fully compatible with projects created in earlier versions. The first time you open a project from v.1.0 or v.2.0, you will be prompted to convert your database to the new format. At this time, you will have the option to create a back up copy of your database, which is highly recommended.

In addition, it is recommended that you create a backup of the "Projects" directory before you open projects in the new version of HydroGeo Analyst. This can be done using the options in "My Computer", or "Windows Explorer".

Projects from v.1.0 and v.2.0 used "Project Manager" passwords for controlling access to the project. Once a project is upgraded to v.3.0, this password will be ignored and replaced by a username "Admin", with no password user credential. Login with the Admin user name, then you must modify the Project Level Security Document (PLSD) to setup the desired access levels. These options are available under Settings / Manage User Access Levels.

If an administrator password is lost, it cannot be retrieved. It is recommended to keep the project administrator password in a safe place, or to create multiple project administrators for multiple users, as a backup.



When you open a Map Project for the first time, you may encounter an error: "Error in getting information for project 1. The water level table is missing or doesn't meet the HGA specification". This occurs because water level and screen support has been added to the cross-section editor, and this table was not mapped in Templates from v.1.0. To fix this problem:

- In the main window, load the Template Manager (Settings / Template Manager)
- Load the Profile Settings (click on the Set Profile Settings button from the top toolbar)
- Select the Water Level tab
- Select an appropriate table for the Water Level info (default is water_level)
- Select an appropriate field for the Level type (default is water_level_remark)
- Save and close the Template, then re-open the map project.

We hope you find working with this new version of HydroGeo Analyst as exciting as we do! If you have any further questions or concerns please feel free to contact Technical Support Services at: sws-support@slb.com.

For more information about WHI's Environmental Information Technology (EIT) services:

Email: sws-support@slb.com

Web: <http://www.waterloohydrogeologic.com/support.htm>



Thank you for reading this month's edition of WHI E-News! For more information about our products and services, please use the links below!

[Visit our Website](#) - See what Waterloo Hydrogeologic Inc. has to offer!

[Software Division](#) - Check out our groundwater modeling software.

[Consulting Division](#) - Visit our Consulting Division on the web to see how we can help you.

[Training Division](#) - Visit our Training Division on the web to find a course in your area.

[Equipment Division](#) - WHI is now selling groundwater monitoring equipment.

editions of WHI E-News, please reply to this message with the word 'Remove' in the subject line.

 TOP



Waterloo Hydrogeologic, Inc.

Website: www.waterloohydrogeologic.com

Email: info@waterloohydrogeologic.com

Phone: 519-746-1798 Fax: 519-885-5262

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