



## flexAEM™ System for Groundwater Modeling

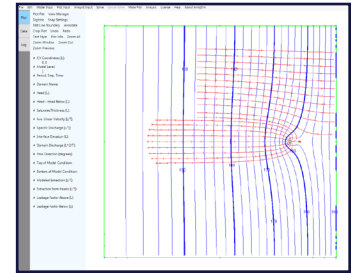
The flexAEM™ System is designed to introduce you to the power, accuracy and ease of use of the analytic element method (AEM) approach to groundwater modeling using the new AnAqSim AEM modeling software.

Tutorials and software tools have been developed to lead you step-by-step through the process of building and running AEM groundwater models for problems that cover the range from simple single-layer steady-state models to complex multi-layer transient simulations.

The flexAEM™ System also includes a toolkit of groundwater flow and aquifer response calculators. These calculators allow groundwater scientists and engineers to rapidly assess groundwater flow patterns and velocities, pumping or infiltration aquifer stresses, and remediation system designs. Training courses are also offered for those who prefer in-person hands-on instruction. Courses cover the fundamentals of the AEM method, features and capabilities of AnAqSim, and application of AEM groundwater modeling to a broad range of groundwater modeling analyses.

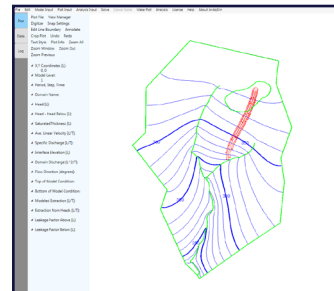
## AEM Groundwater Modeling

Groundwater modeling is a valuable tool for managing water resources, assessing and remediating impacted sites, and designing and permitting natural hydrologic and engineered systems. For experienced groundwater modelers, flexible and powerful analytic element method (AEM) techniques provide you with a new rapid prototyping / rapid insight component for your toolkit. For non-modeler hydrogeologists and engineers, AEM modeling provides you with a “kinder and gentler” introduction to groundwater modeling for the occasions on which you might want to run a quick analysis without climbing the learning curve of complex modeling software. The flexAEM™ System is designed to introduce modelers and non-modelers to this new way of modeling through a series of tutorials, tools and courses that explain in easy-to-follow, step-by-step instructions, the concepts and applications of the method.



## flexAEM™ System Tutorials, Tools, and Training

Analytic element method (AEM) groundwater modeling provides an almost perfect balance of simplicity and power for typical groundwater analysis projects. To make AEM modeling accessible for any groundwater project, McLane Environmental has developed the flexAEM™ System of tools and training. The system is built on the power, flexibility and speed of the AnAqSim AEM groundwater modeling software. AnAqSim, a new AEM modeling approach based on the subdomain method (Fitts 2010), “breaks the mold” for an AEM model by allowing all of the typical elements (wells, rivers, flow barriers) to be applied in a single- or multi-layer aquifer, with horizontal and/or vertical anisotropy, for steady-state or transient simulations.



*flexAEM*<sup>™</sup> tutorials cover every aspect of setting up and running an AnAqSim model. They are self-paced and move from simple to more complex topics. Along the way the user is introduced to tips on model design, examples of how to use the various analysis tools to examine model results, and helpful hints on how to avoid or troubleshoot common problems. The *flexAEM*<sup>™</sup> system is designed to assist the user in creating an AnAqSim model within a matter of hours, and to become a proficient AnAqSim modeler within several days or weeks depending on prior experience.



*flexAEM*<sup>™</sup> software tools make AEM groundwater modeling even easier. They include custom tools for the creation of analytic elements composed of precise geometric shapes at any rotation angle, preparation and conversion of parameter values for input into AnAqSim, and the evaluation of model results. The *flexAEM*<sup>™</sup> system also includes linkages

with other commercial software that assists the user in creating basemaps and input data sets, and displaying model results (contours, pathlines, flow vectors) in two and three dimensions.

For those who want to quickly apply the AEM modeling method for a project before working through the training series, *flexAEM*<sup>™</sup> Remediation Calculators that provide easy-to-use, powerful software tools for analyzing typical subsurface remediation systems such as extraction wells, collector trenches, slurry walls, permeable reactive barriers, and soil vapor extraction systems, are also available. The calculators are packaged as a set of files that run as AnAqSim “plug-ins”, taking full advantage of the consistent and easy-to-use AnAqSim data entry system, graphical results display, and analysis tools.

## Contact Us!

For more information on the *flexAEM*<sup>™</sup> System of training, tools, and courses visit:

<http://www.flexAEM.com>

Or email Customer Service at:

[support@flexAEM.com](mailto:support@flexAEM.com)

McLane Environmental, LLC  
[www.McLaneEnv.com](http://www.McLaneEnv.com)  
[www.flexAEM.com](http://www.flexAEM.com)

## Try *flexAEM*<sup>™</sup> – How to Get Started

### **New to AEM modeling or AnAqSim?**

#### **Build a quick AEM Model in AnAqSim**

Download our “Hello World” tutorial and build a simple model in about 15 minutes! This quick example is available at:

[www.flexAEM.com/downloads/flexAEM\\_Hello\\_World.pdf](http://www.flexAEM.com/downloads/flexAEM_Hello_World.pdf)

#### **Free Introduction: The EDU Tutorial Series**

To find out what AEM groundwater modeling with the *flexAEM*<sup>™</sup> System is all about, download the free AnAqSim EDU Exercise Package at:

[www.flexAEM.com/tutorials-tools/free-tutorial](http://www.flexAEM.com/tutorials-tools/free-tutorial)

Free tutorials included in our Set 1 Exercise Package introduce you to AEM modeling and the subdomain method. Use AnAqSim to build and run several simple groundwater models. All exercises included in the package may be completed using the free AnAqSim EDU software that can be downloaded from the AnAqSim download page [here](#).

### **Experienced modeler?**

#### **Deeper Exploration of AEM Modeling**

Explore the many features and capabilities of AnAqSim with our AnAqSim Instructional Series Exercise Packages. These packages cover dozens of AnAqSim elements and features including subdomains; stream, river, and drain elements; transient simulations; model calibration techniques and many others. More advanced exercise sets introduce more complex AnAqSim modeling features such as multiple layers and saltwater interface modeling. Information on the various exercise packages, special pricing bundles, and purchasing / download information can be found at:

[www.flexAEM.com/tutorials-tools](http://www.flexAEM.com/tutorials-tools)

### **Need a simple way to analyze remedial designs?**

#### **Simple Analytic Calculators for Groundwater Flow Analysis and Remedial System Design**

Pre-configured groundwater calculators allow you to apply the power of the analytic element method for groundwater flow calculations or remediation system design. Download the free Remediation Calculator Quick Start example at:

[www.flexAEM.com/tutorials-tools/remediation-calculator-toolkit](http://www.flexAEM.com/tutorials-tools/remediation-calculator-toolkit)