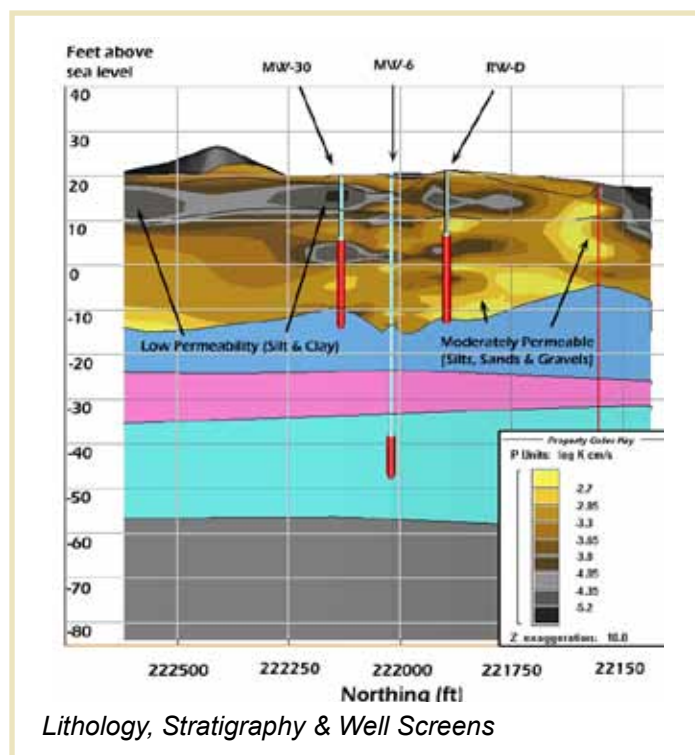


was then used to map hydraulic conductivity heterogeneity relative to underground structures and synoptic models of LNAPL morphology.

Overall, the GFM consolidated data from more than 1000 wells & borings collected over more than 15 years, paper maps and CAD files describing underground structures, digital topographic maps and surveys, aerial imagery, and published geologic maps. Perspective views, x, y, and z slices, and cross-sections were compiled to document and explain the model-simulated geo-spatial relationships.

#### Lithology, Stratigraphy & Well Screens

In 2009, work began on importing the stratigraphic and lithologic framework from EarthVision into FEFLOW. The regional stratigraphic horizons were imported directly to create the lower layers of the flow model. A program was written to assign the upper FEFLOW layers such that they intersect every lithologic contact described in the 3D grid resulting in a nearly perfect match between the conceptual and flow models. Both hydraulic conductivity and recharge in the flow model will be optimized to achieve a global calibration. Fate and transport modeling will then be performed to determine how dissolved-phase VOCs will migrate through the surficial aquifer away from the LNAPL and the extent to which contamination may travel vertically into a lower potable aquifer.



### SELF ASSESSMENT

We have met or exceeded all project expectations. The expanded budget reflects additional modeling work requested to meet evolving project requirements. Our most significant problems stemmed from managing data inconsistencies and adapting to evolving objectives or limitations imposed by a litigation effort. We developed database comparison protocols to ensure that all database changes enacted by the litigation team are identified and appropriately addressed in the modeling database. We automated model development processes that have allowed us to rapidly rebuild the GFM and all relevant visualizations to accommodate new data and/or revised interpretations. We also adopted a milestone approach to modeling to allow for periodic review with the remediation and litigation teams and adopt course adjustments as necessary.