Geologic Setting: Shallow and Local Geology

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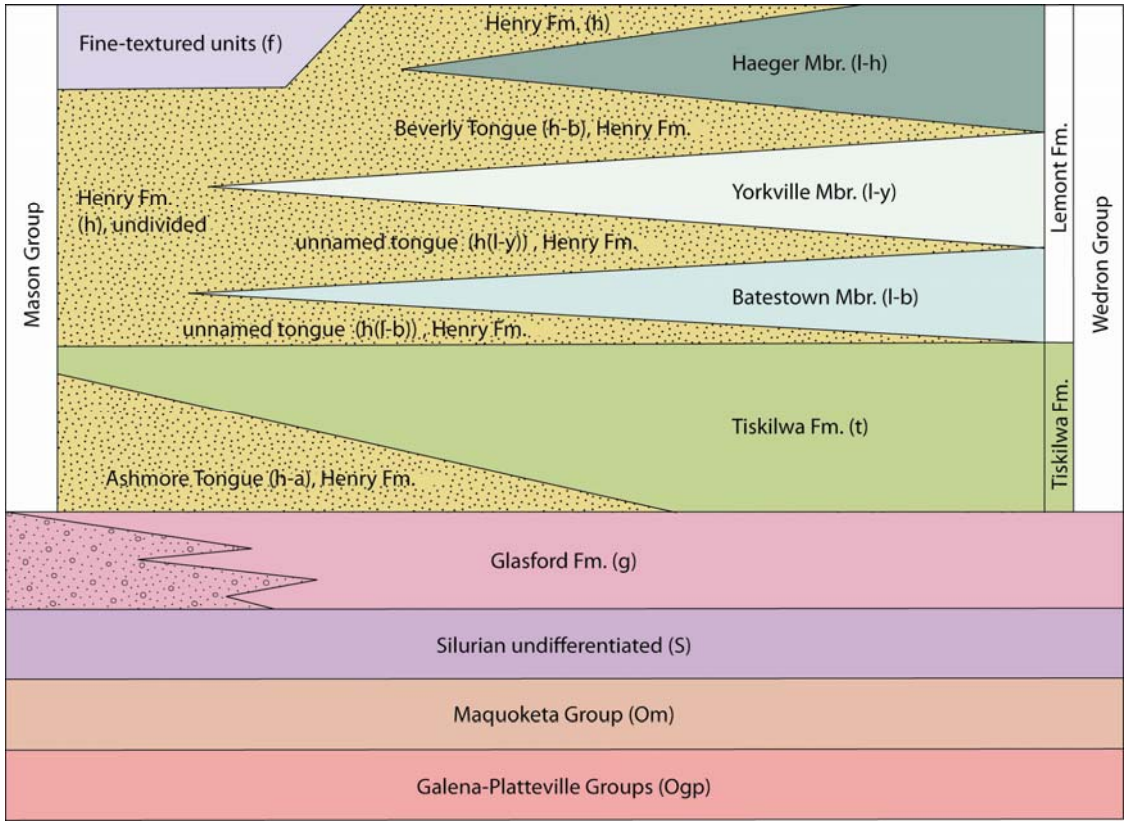
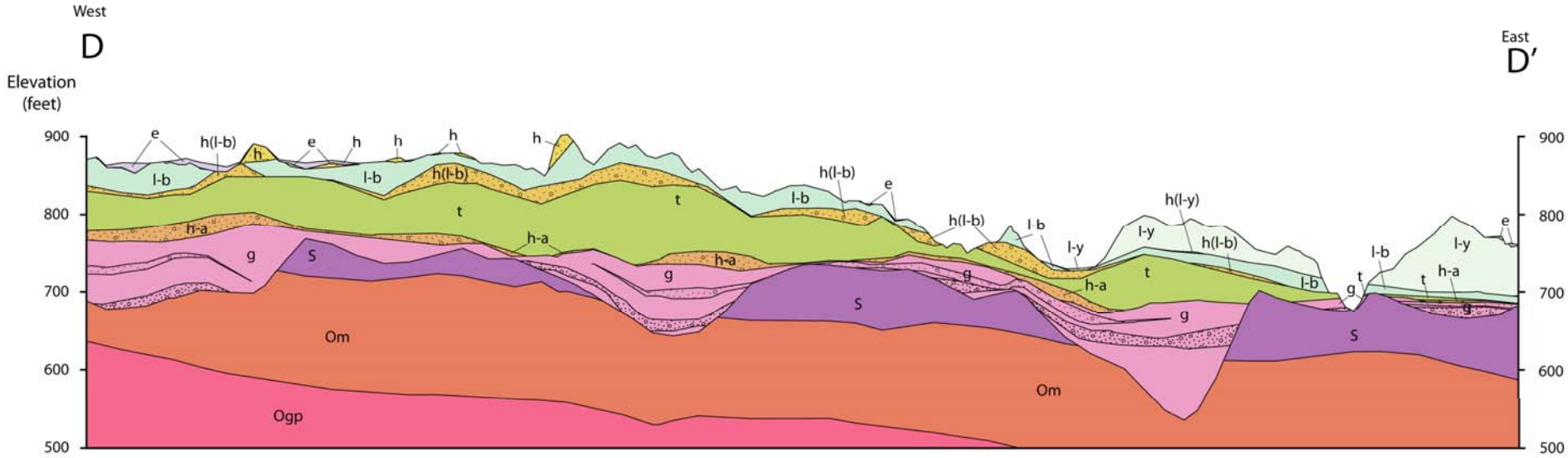
Quarry View of Quaternary Units

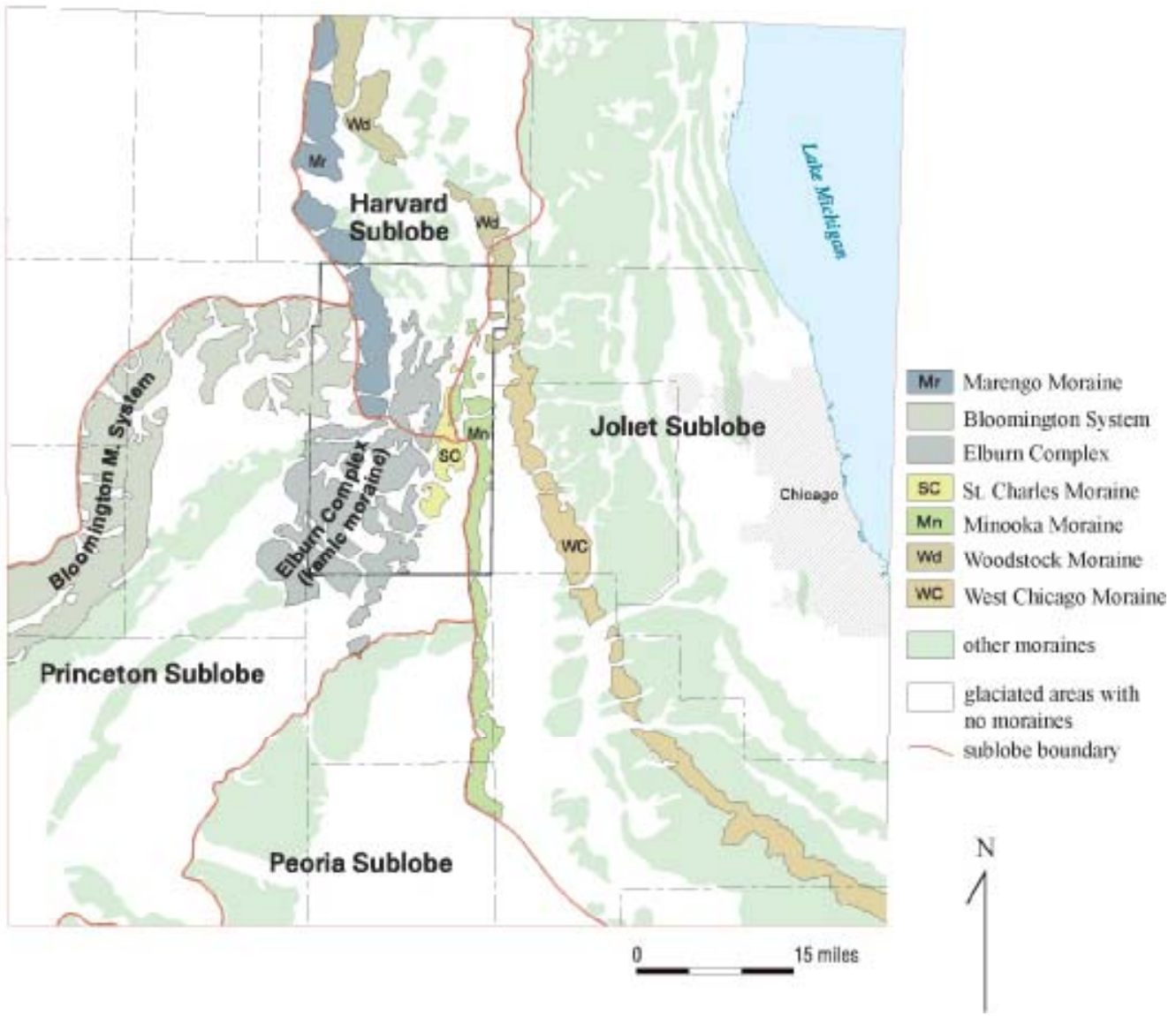
Sequence of Geologic Units



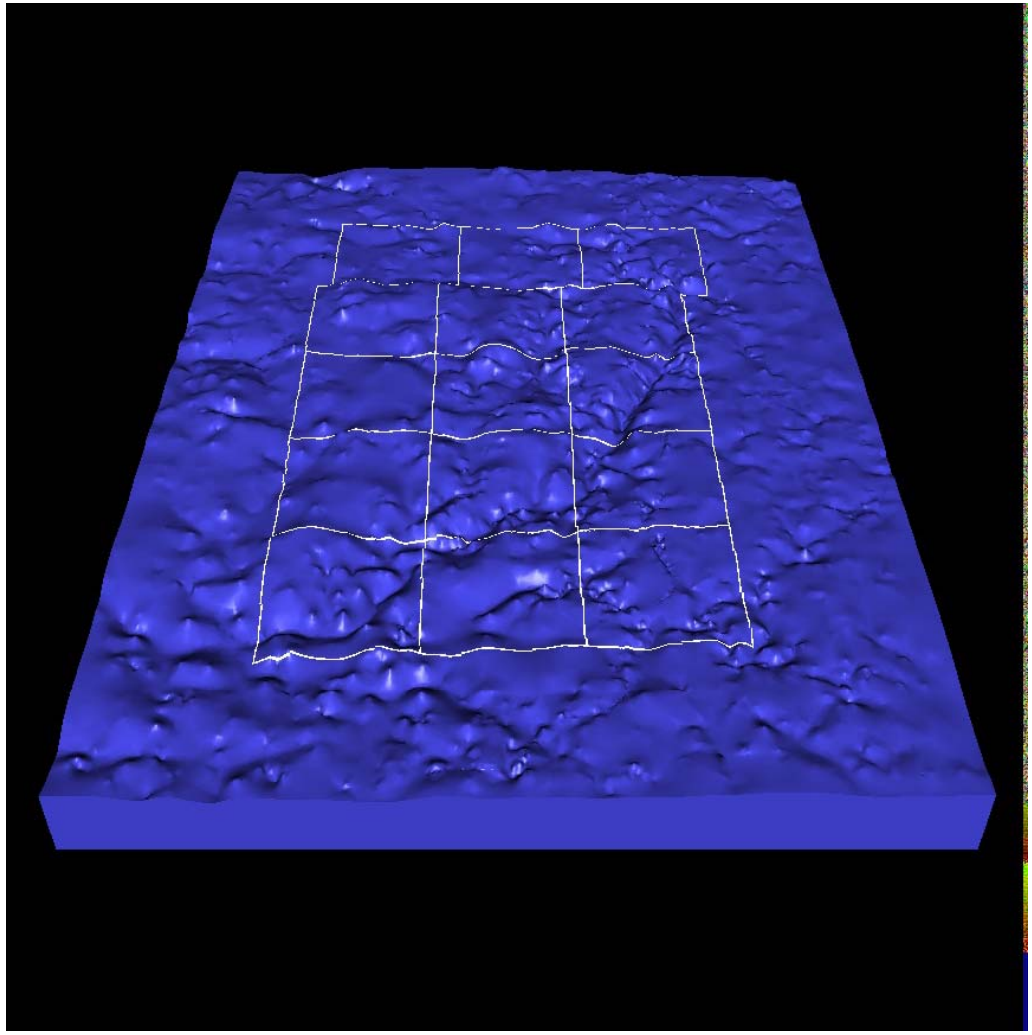
Geologic Cross Section



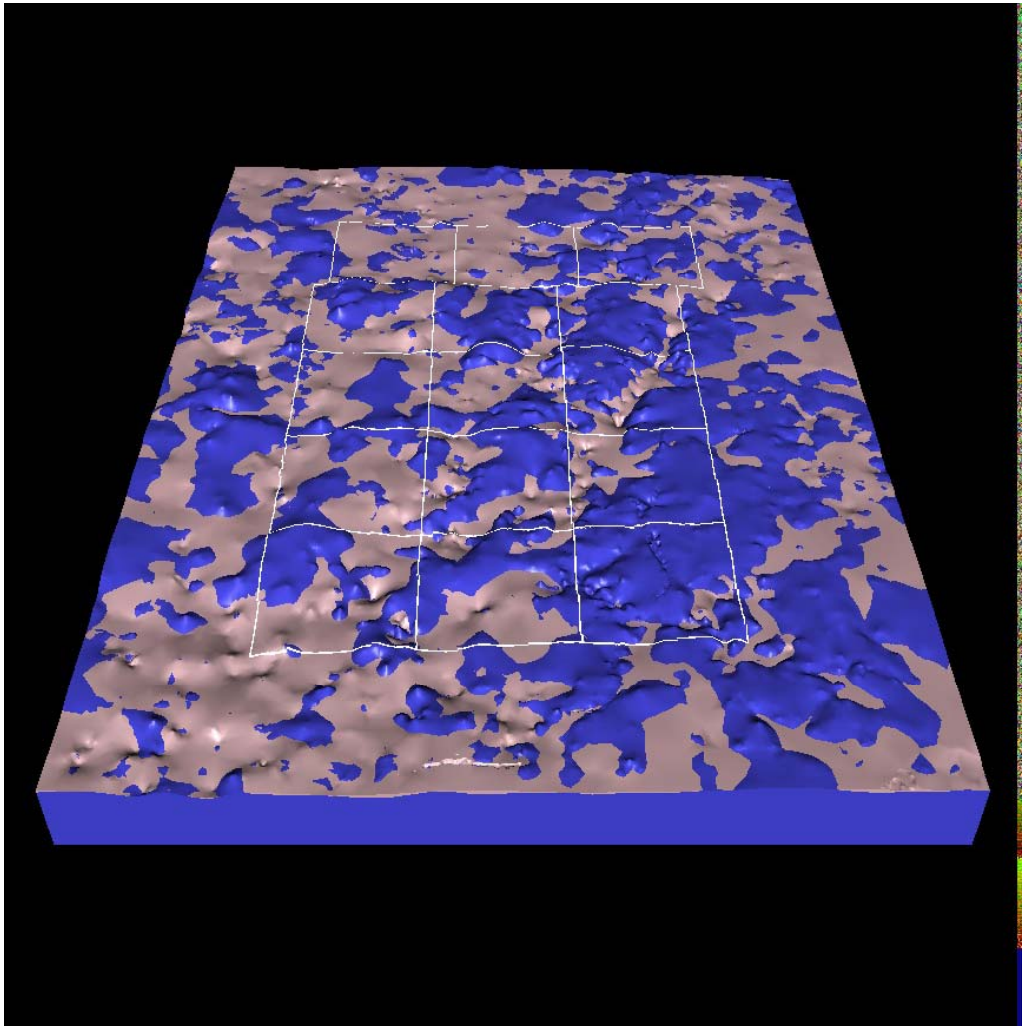
Regional Moraines



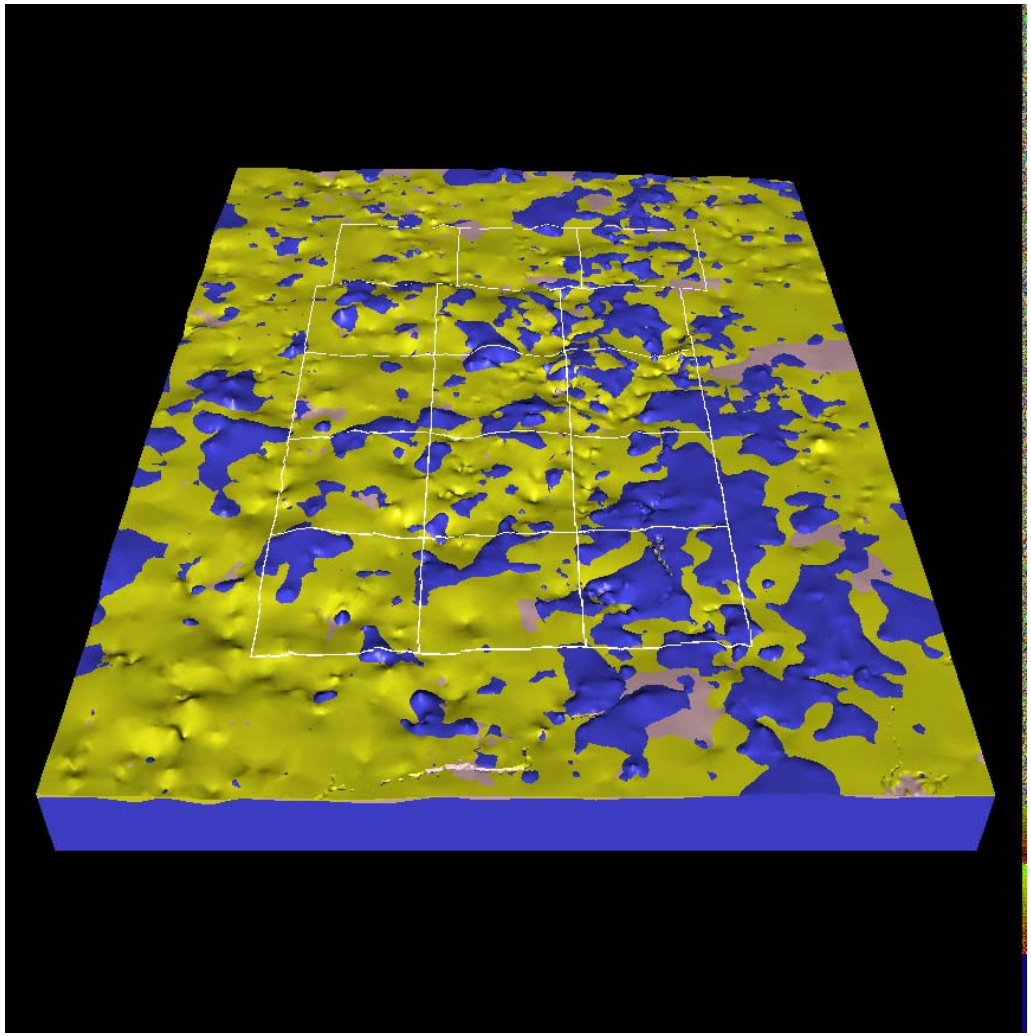
Bedrock Surface



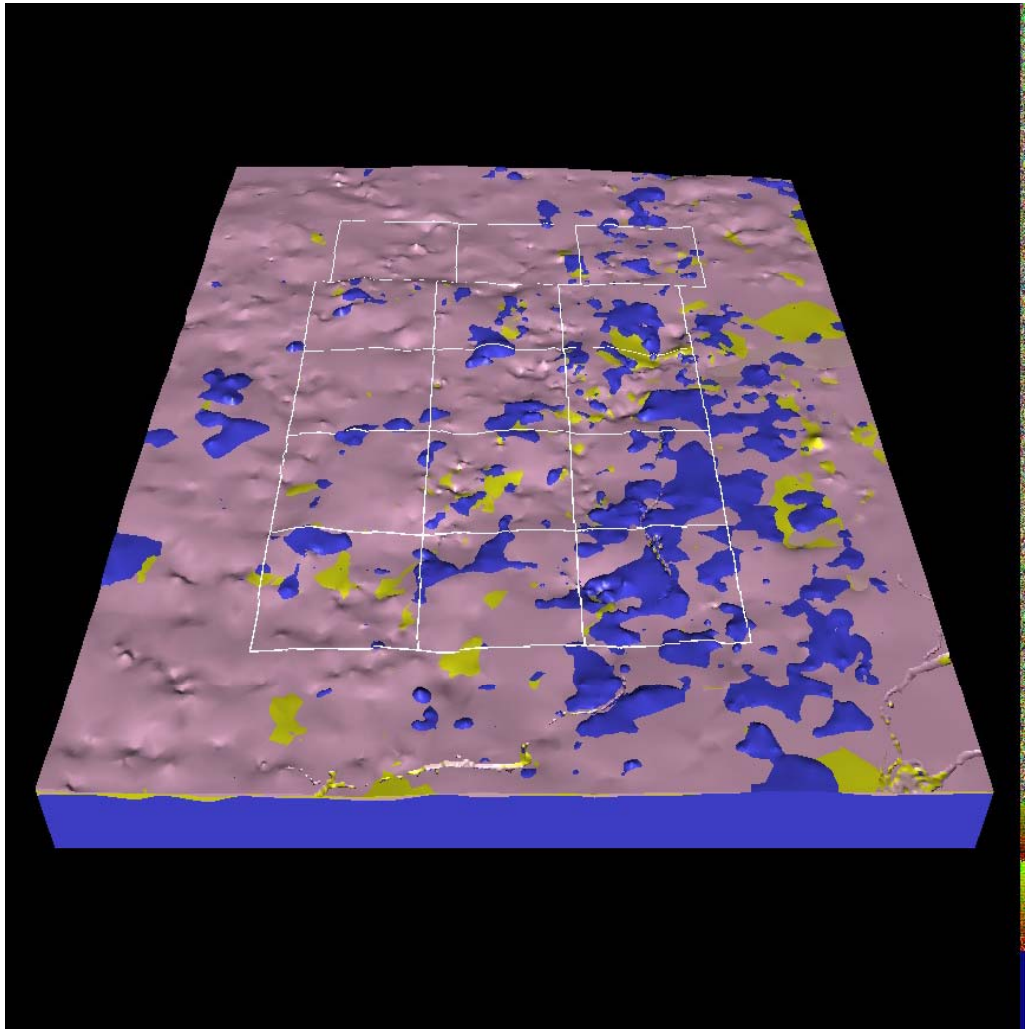
Glasford Lower Fine-textured Unit



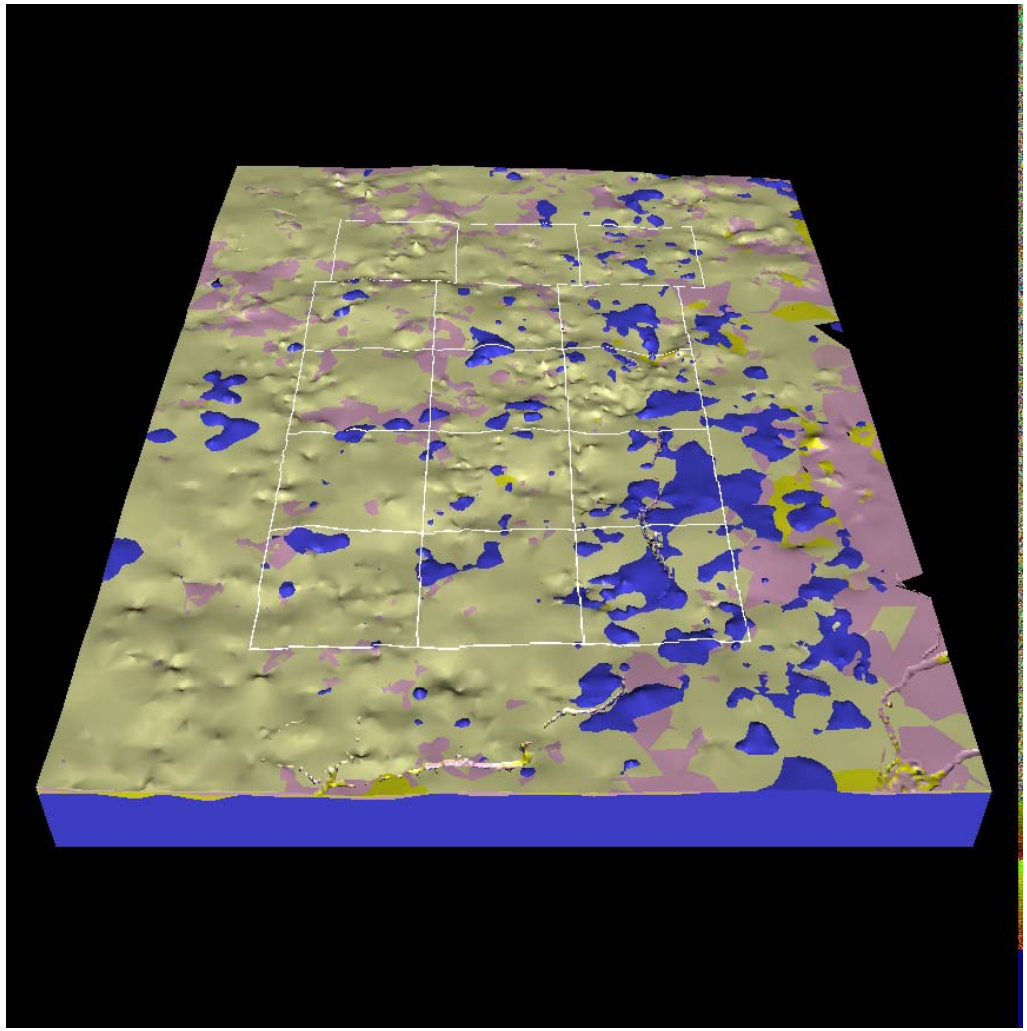
Glasford Lower Coarse-textured Unit



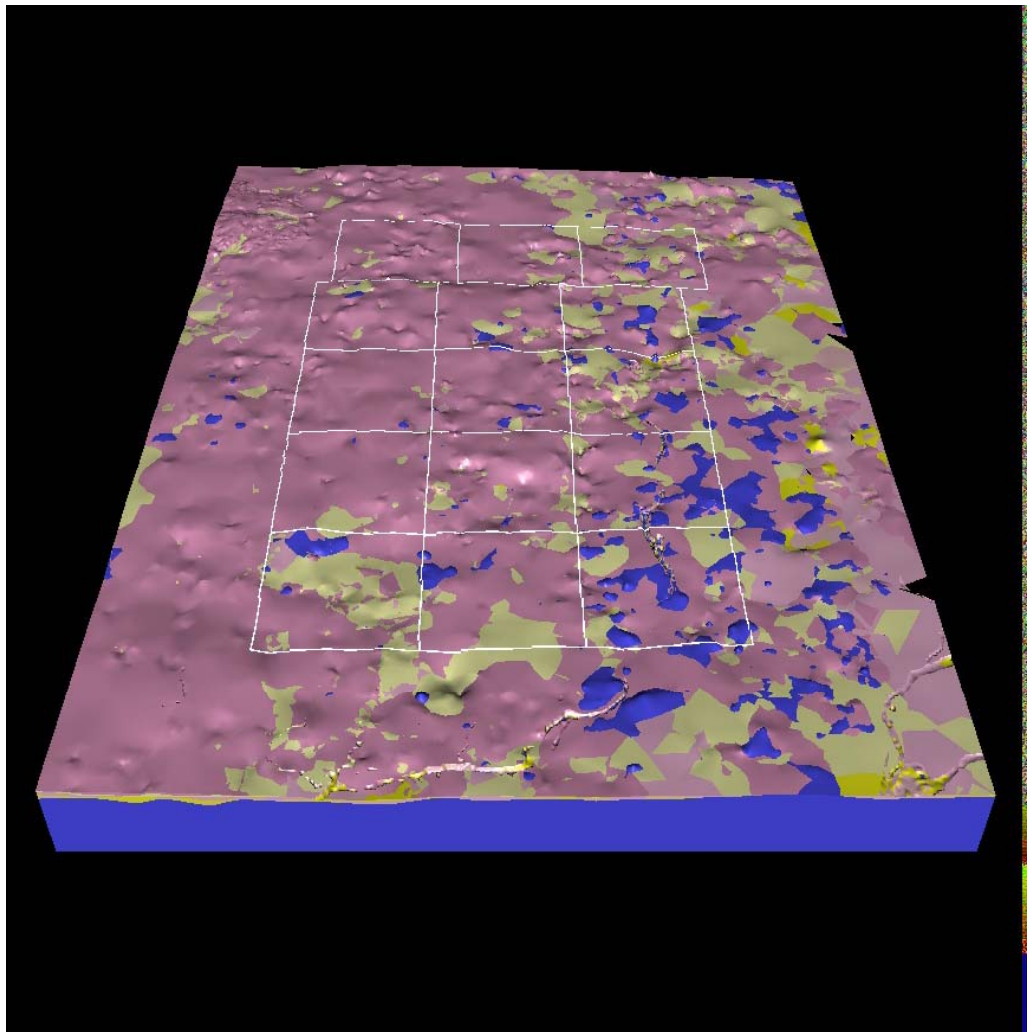
Glasford Middle Fine-textured Unit



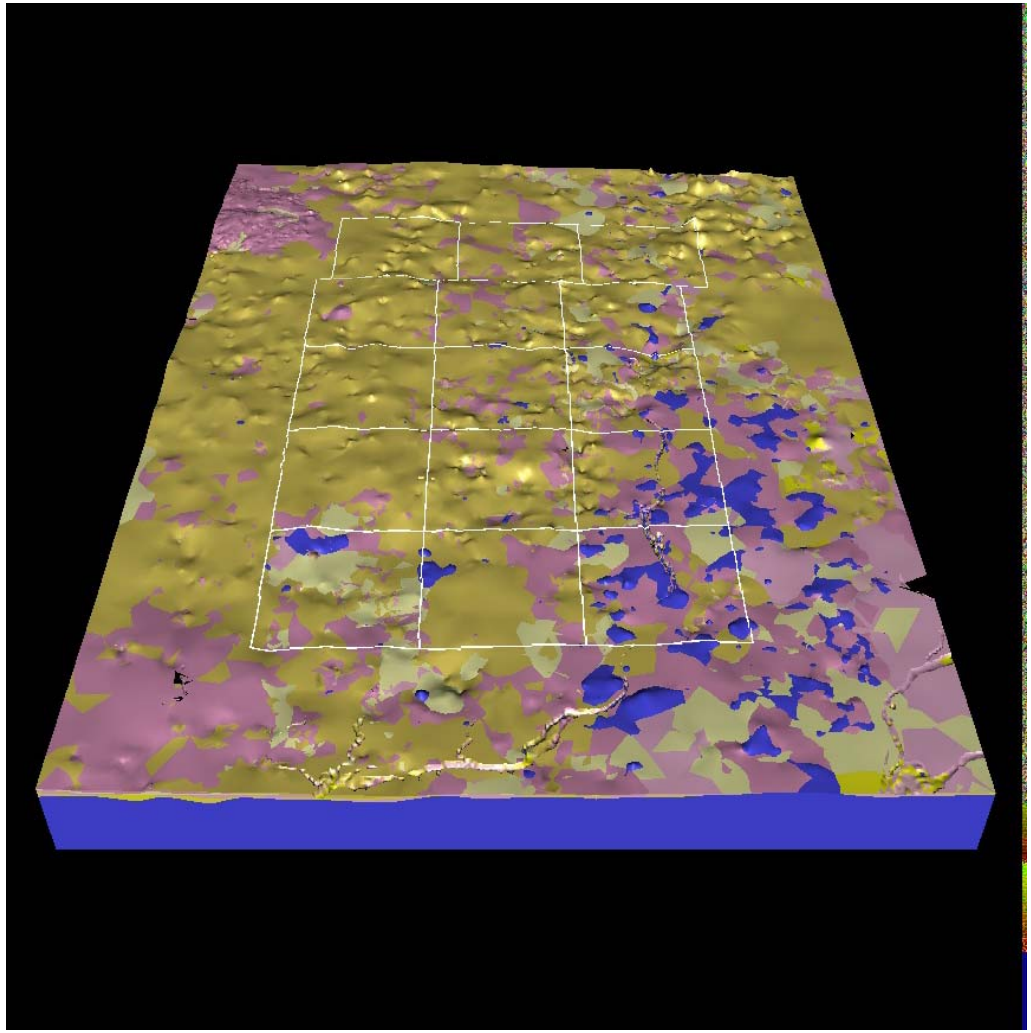
Glasford Upper Coarse-textured Unit



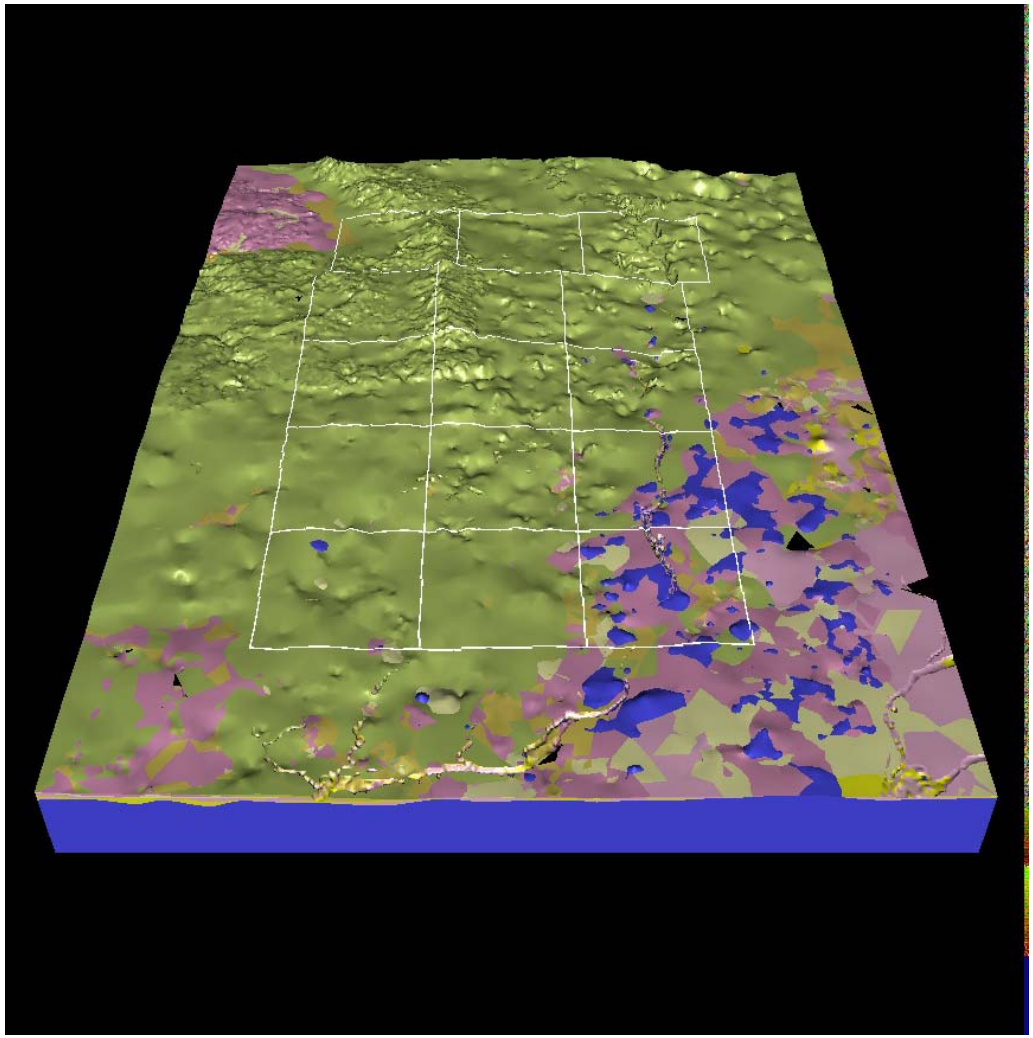
Glasford Upper Fine-textured Unit



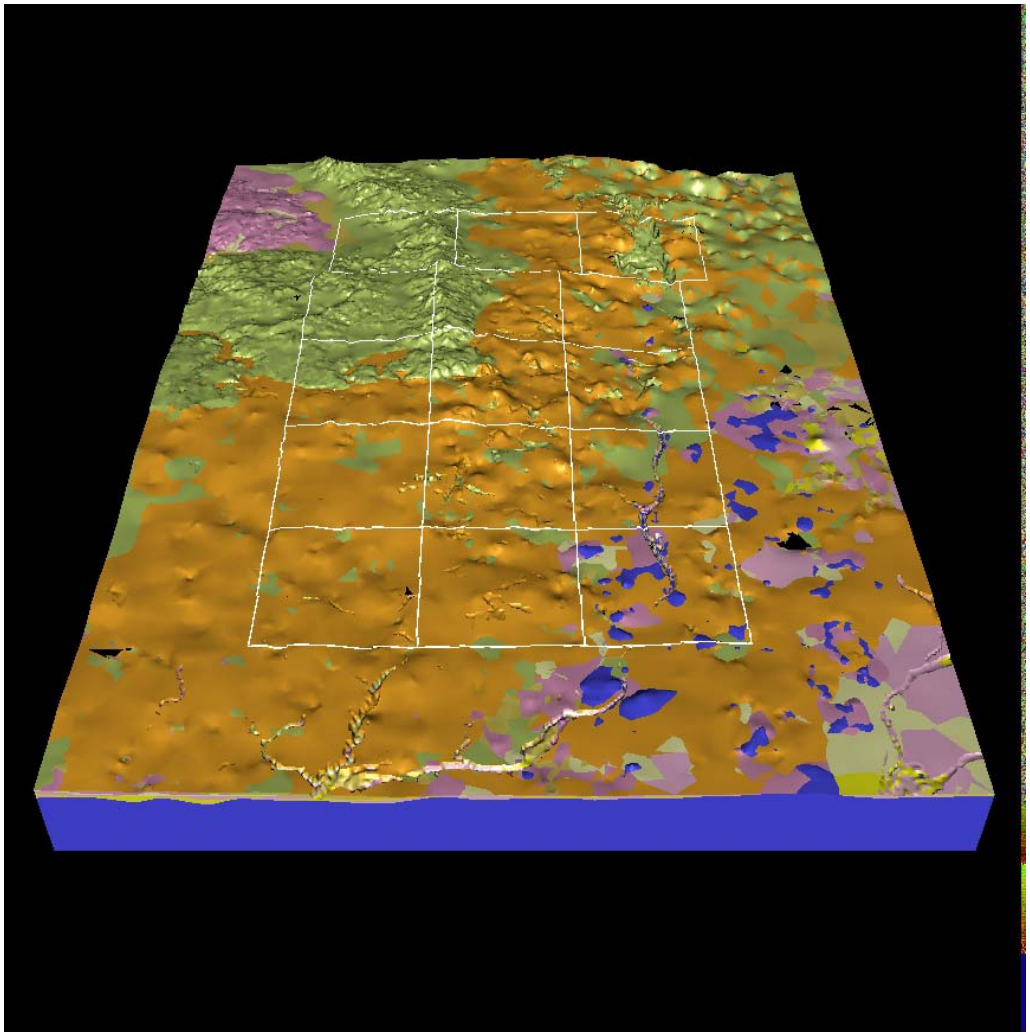
Ashmore Tongue



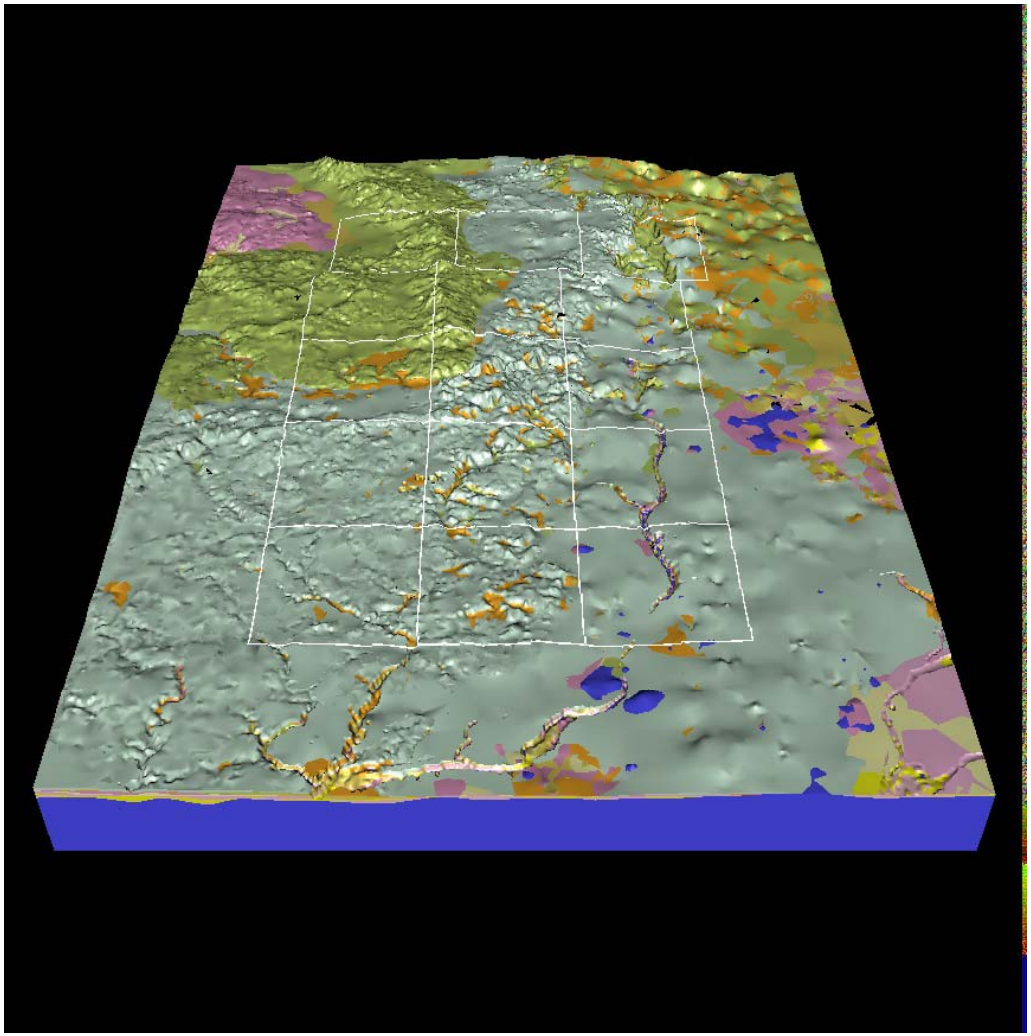
Tiskilwa Formation



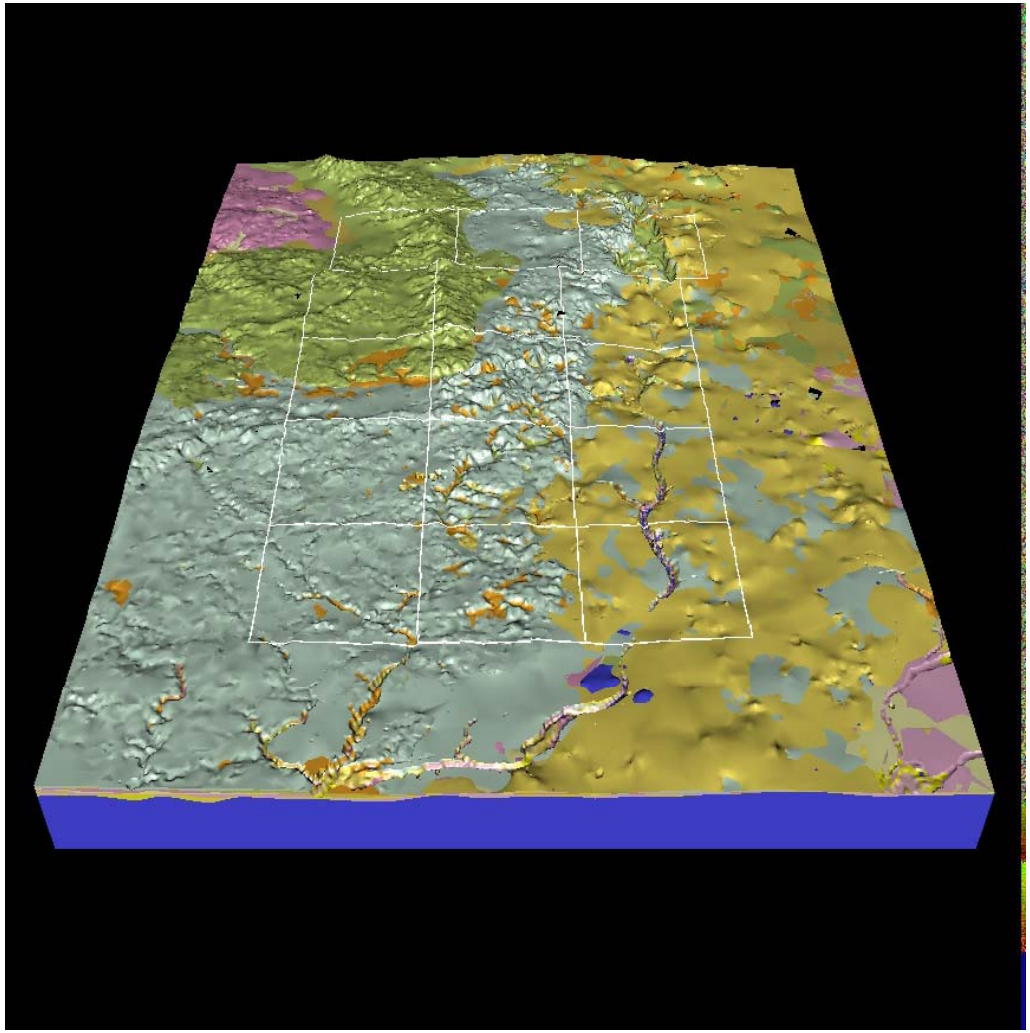
Sub-Batestown Tongue



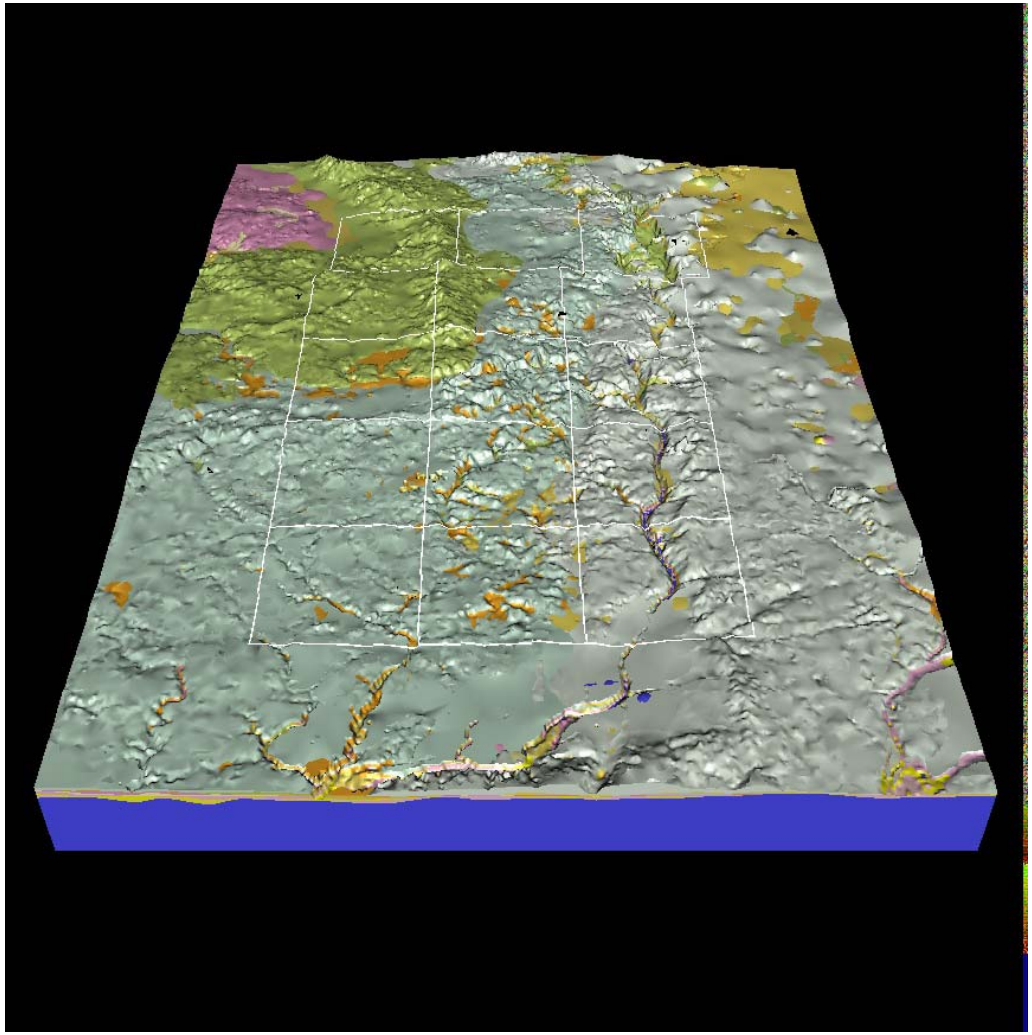
Batestown Member



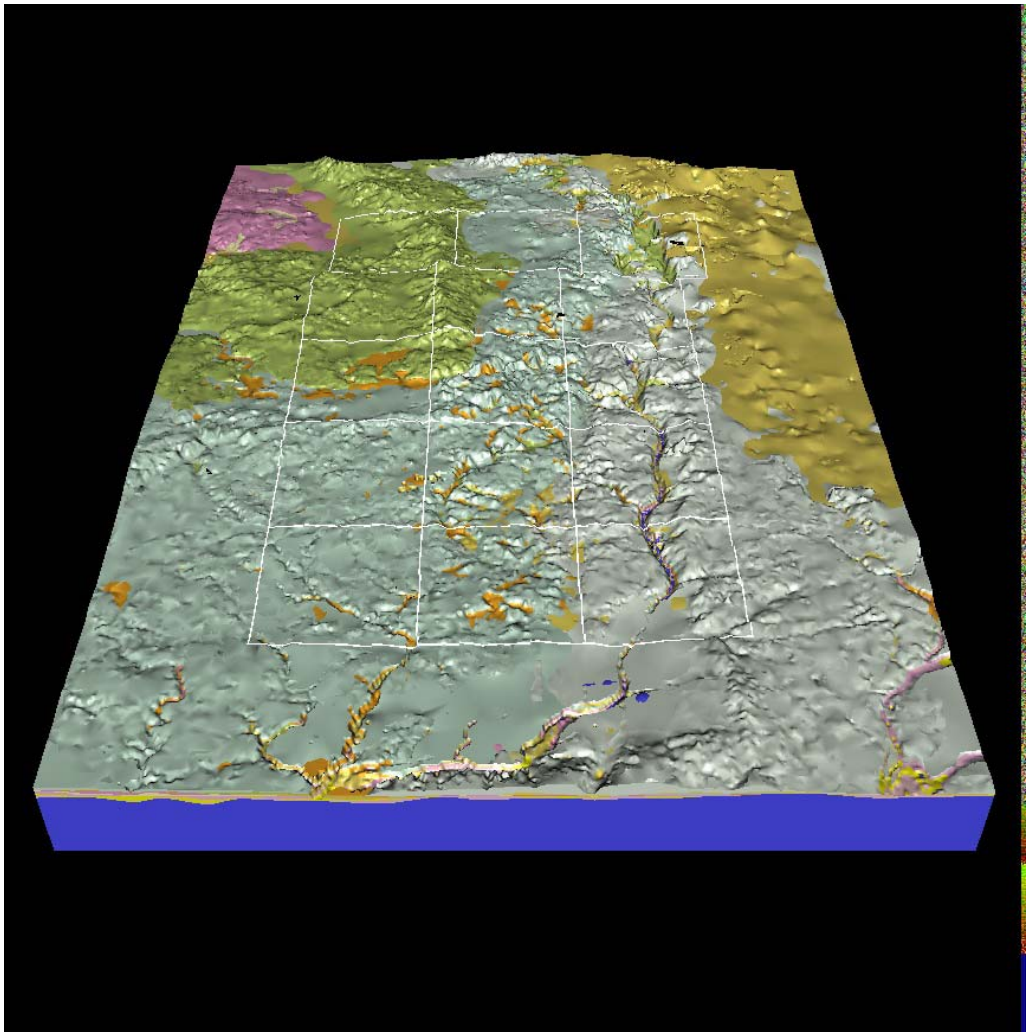
Sub-Yorkville Tongue



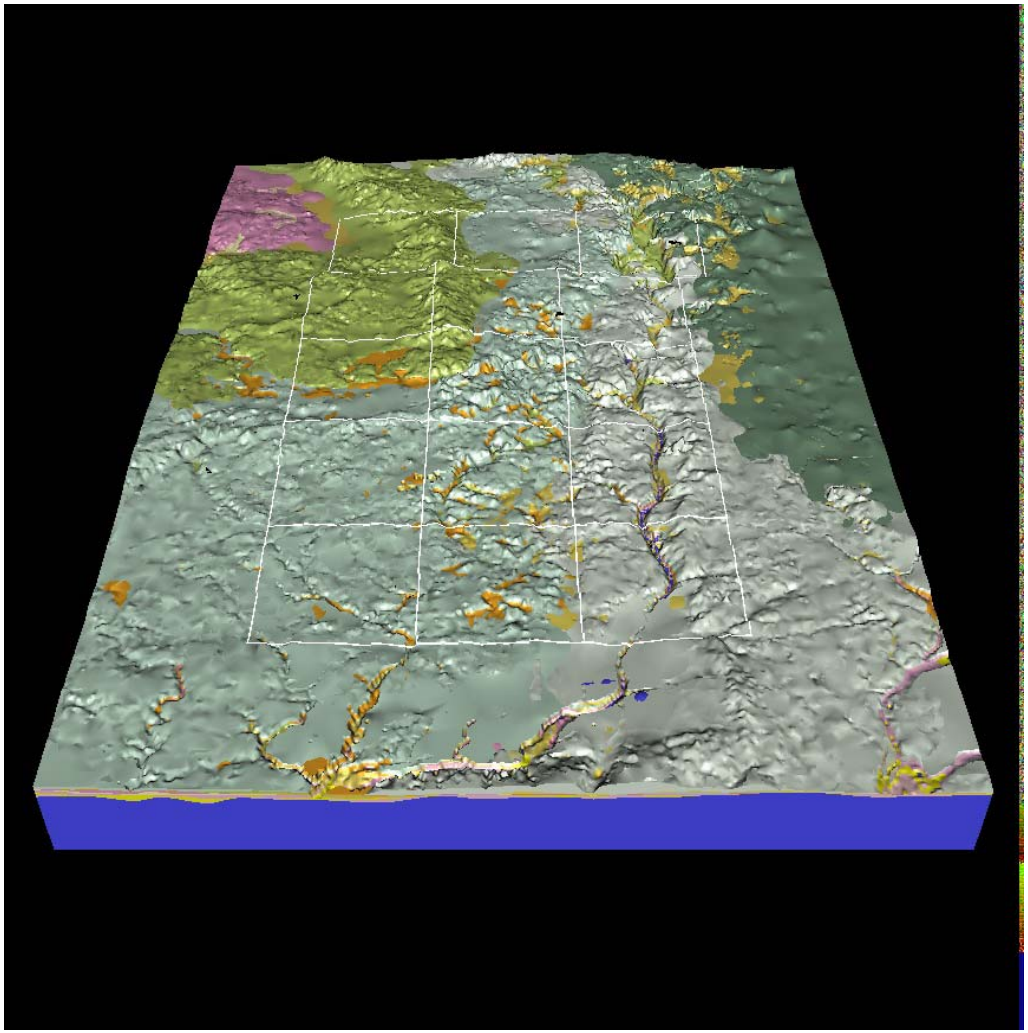
Yorkville Member



Beverly Tongue

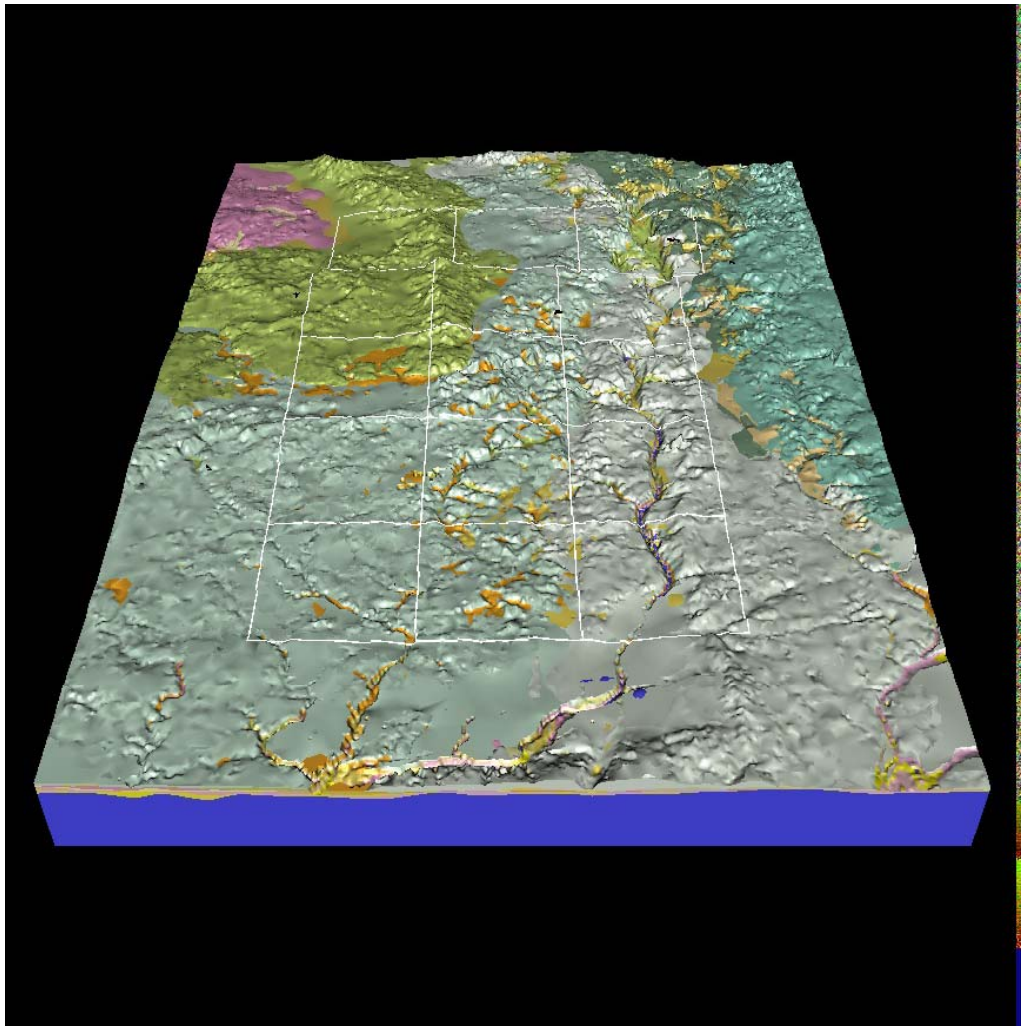


Haeger Member

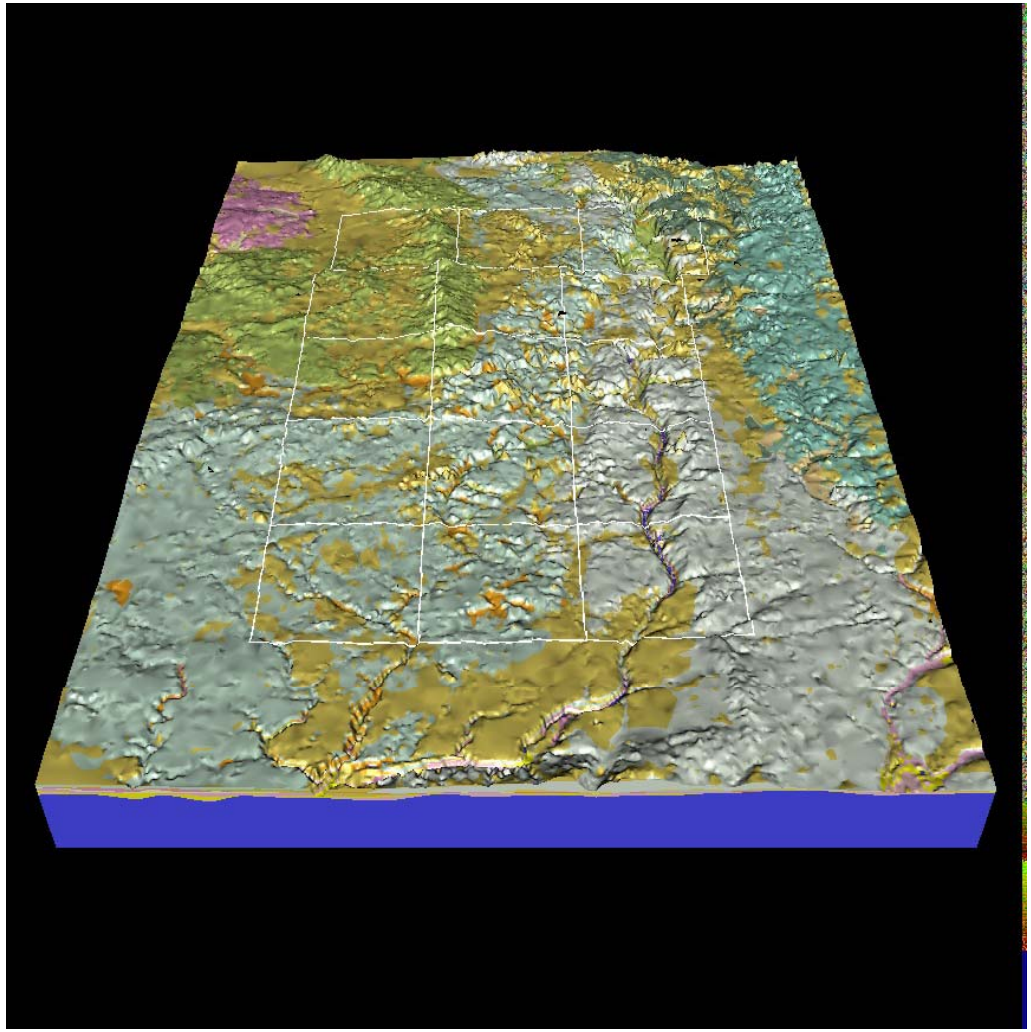


Sub-Wadsworth Tongue

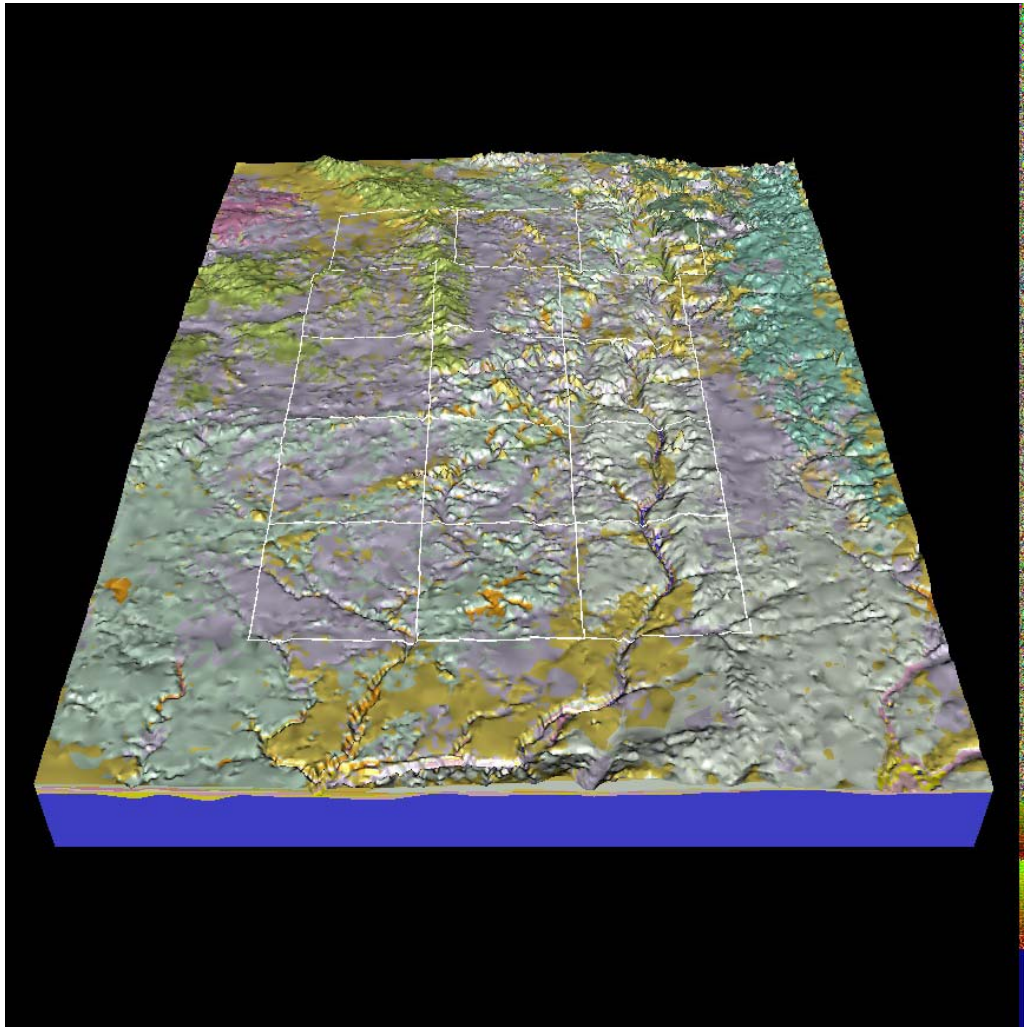
Wadsworth Formation



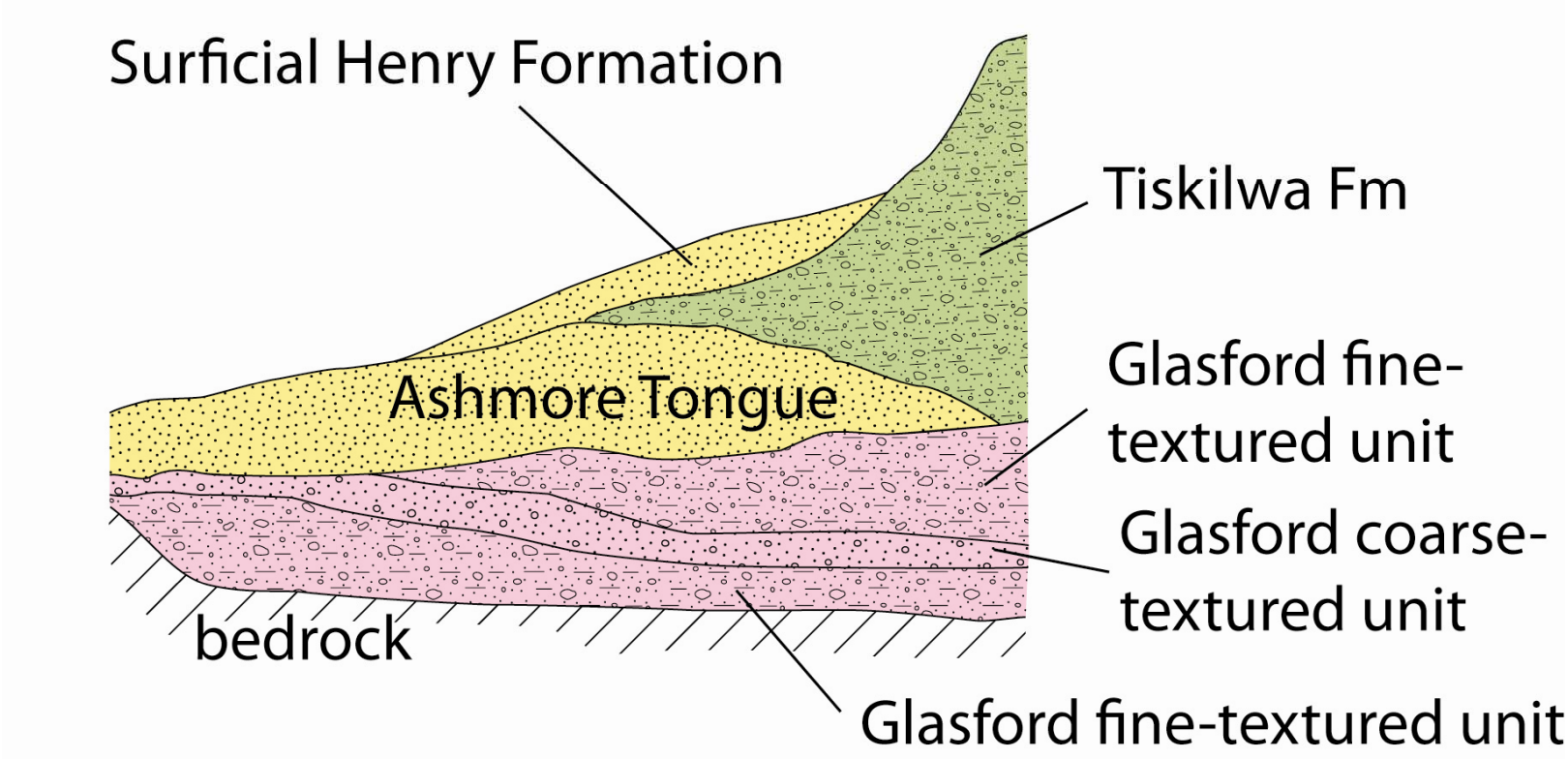
Surficial Henry Formation



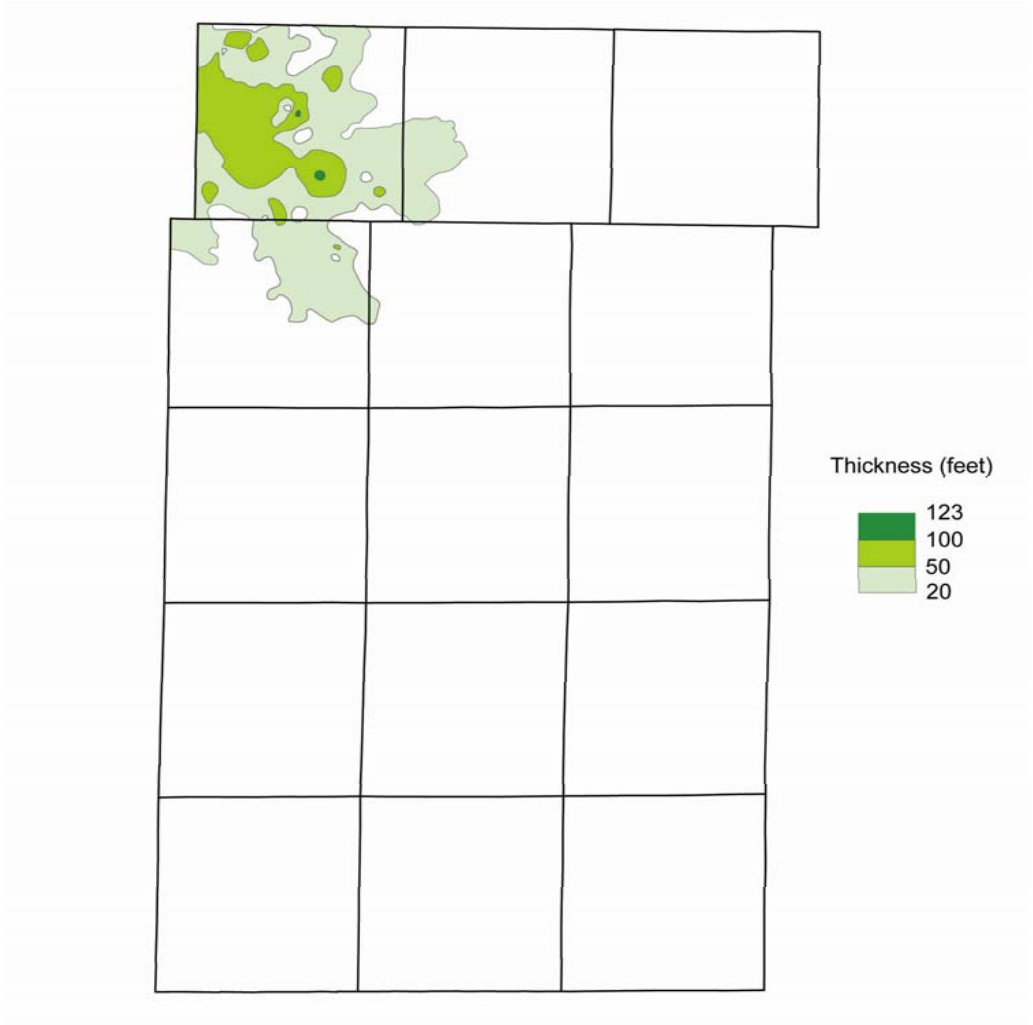
Equality Formation



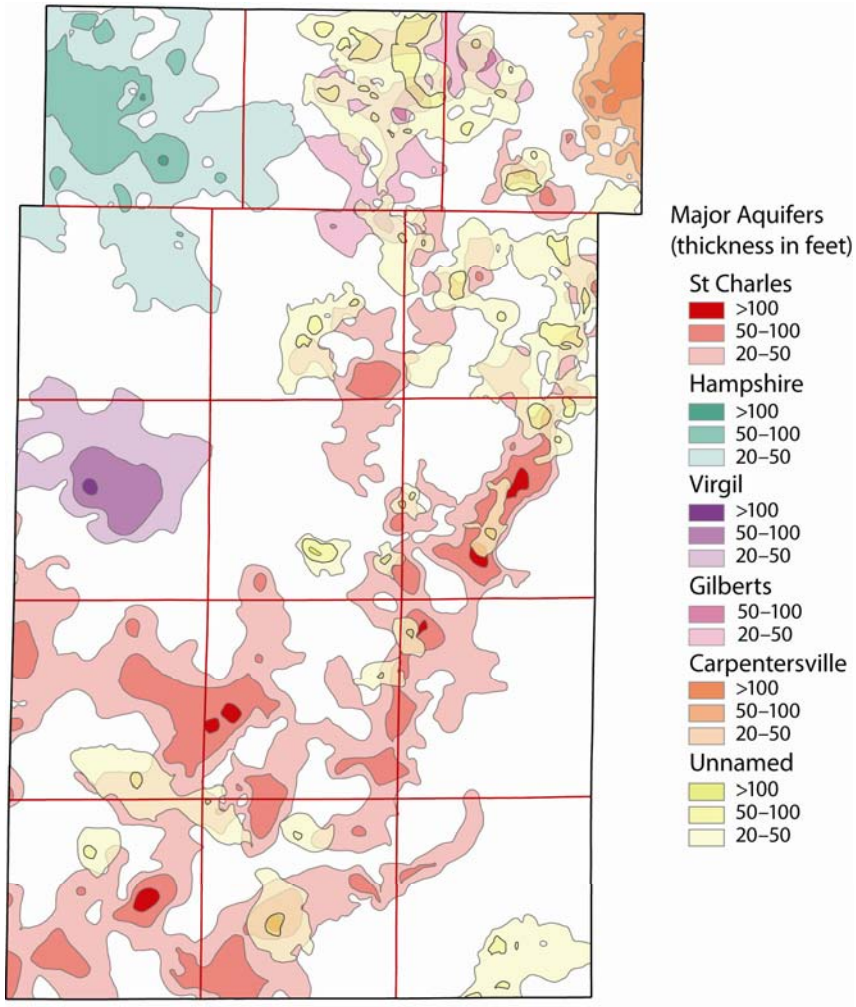
Hampshire Aquifer Cross Section



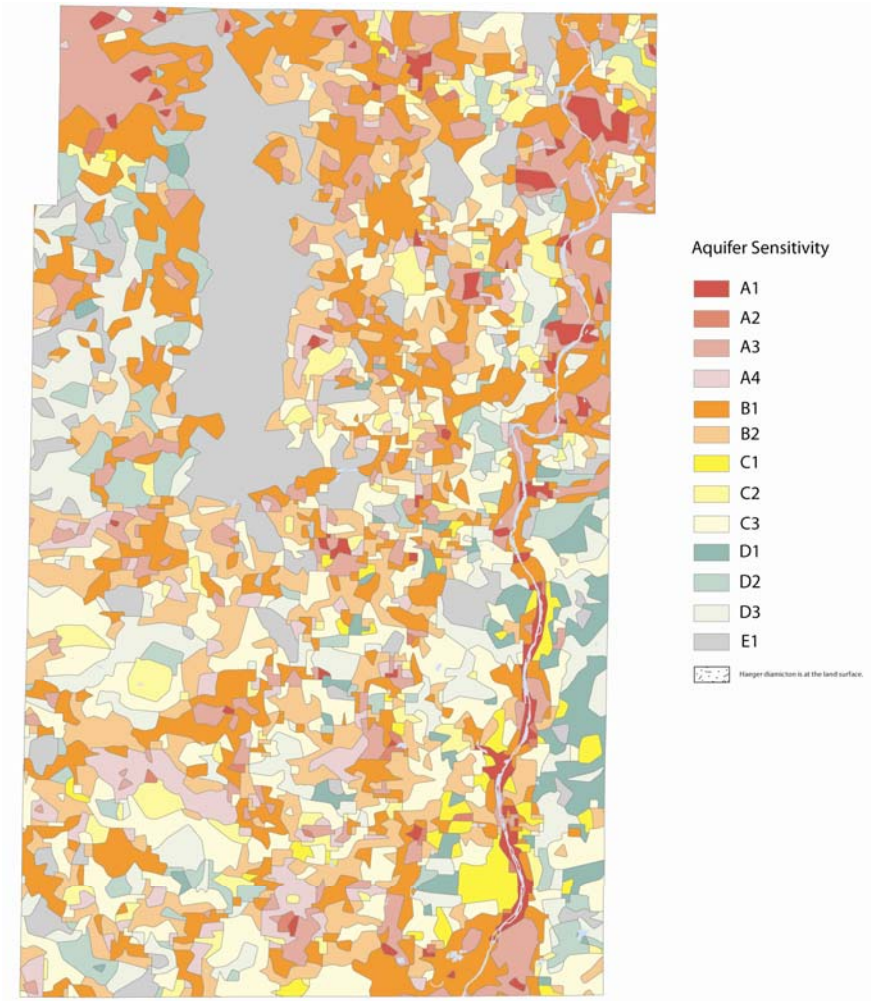
Hampshire Aquifer Thickness



Major Quaternary Aquifers



Aquifer Sensitivity to Contamination



Conclusions

- Extensive mapping has provided a very good understanding of the distribution of shallow geologic units.
- Groundwater resources consist of upper bedrock units where secondary porosity has developed and Quaternary sand and gravel units.
- Discontinuities in the fine-textured units provide pathways for groundwater flow and allow vertically adjacent sand and gravels to behave as a single aquifer.
- Three-dimensional modeling of the geologic units has provided maps of the location and thickness of aquifers, potential for aquifer contamination from surface sources, and input for groundwater flow modeling.