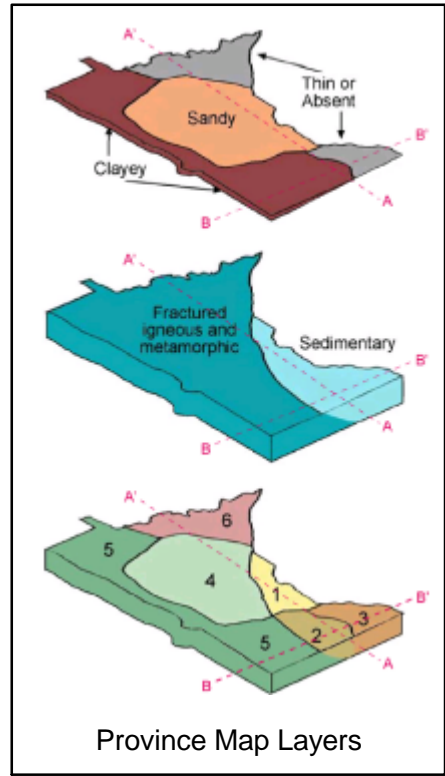
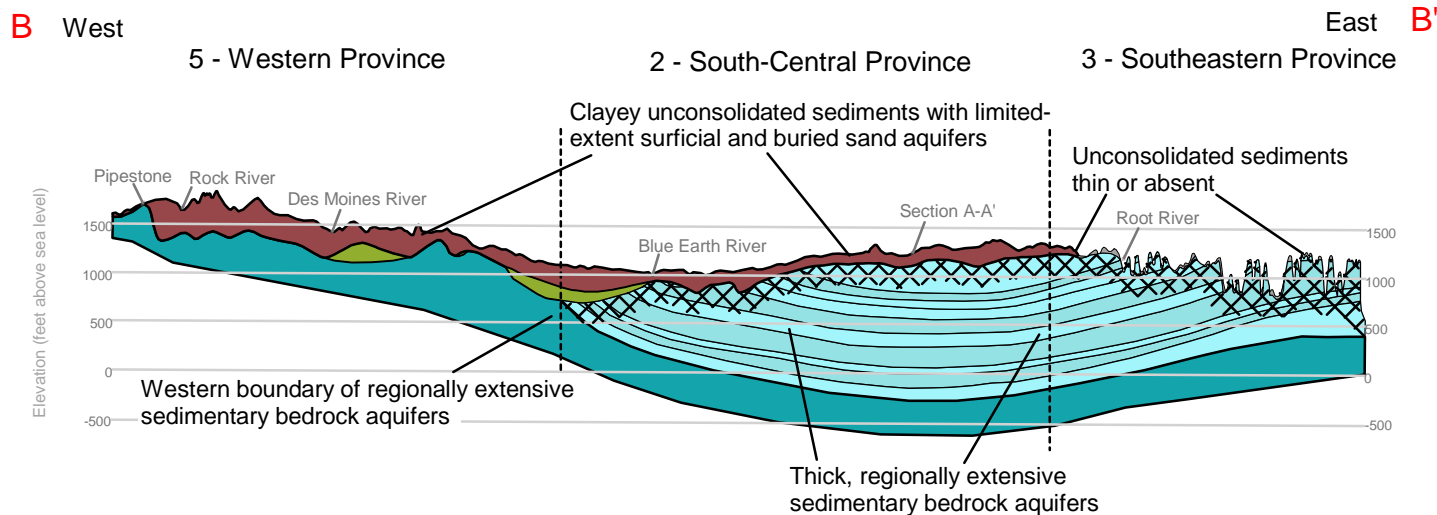
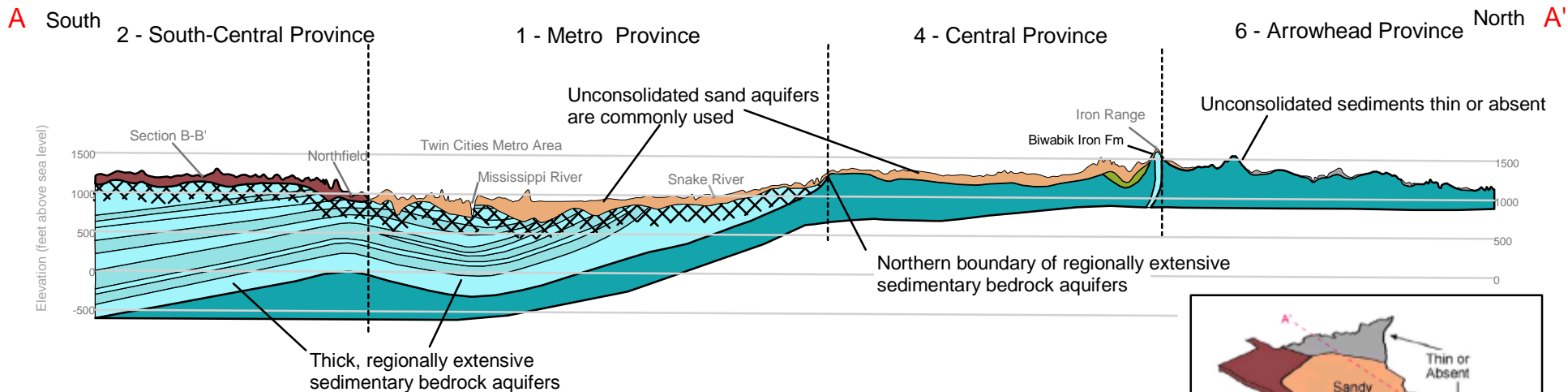


# Minnesota Ground Water Provinces - Generalized Cross Sections



## Explanation

- |   |   |
|---|---|
| Clayey unconsolidated sediments with limited-extent sand aquifers (Quaternary)  | Regional sedimentary bedrock  |
| Sandy unconsolidated sediments; sand aquifers common (Quaternary)   | Bedrock aquifers *  |
| Thin, unconsolidated sediments with the exception of sand aquifers (Quaternary) in major river valleys that are frequently used | Confining units *   |
| Cretaceous shale and sandstone; used locally as water source  | "Shallow" bedrock conditions - Secondary porosity may be enhanced in both aquifer and confining units as much as 200 feet below top of bedrock. |
| Precambrian bedrock; can provide ground water locally from fractures  |   |
- \* Aquifer and confining unit characteristics can vary regionally, locally, and according to depth as described below.

Sources: Kanivetsky, Roman, 1978, Hydrogeologic Map of Minnesota, Bedrock Hydrogeology, Minnesota Geological Survey, State Map Series S-2, Sheet 2.  
 Mossler, John H., 1983, Paleozoic Lithostratigraphy of Southeastern Minnesota, Minnesota Geological Survey, Miscellaneous Map Series Map M-51.  
 Runkel, A.C. et al., 2001, Hydrogeology of the Paleozoic Bedrock in Southeastern Minnesota, Minnesota Geological Survey (in progress).

Scale: 30 Miles

Approximate vertical exaggeration X 100