QUATERNARY DEPOSITS

Hudson Episode (c. 10,000 years before present; B.P.) [today]

- Contains primarily gravel, sand, and clay
- Emplaced primarily by glacial meltwater
- Interbedded with till, glacial outwash, and drumlins
- Deposited in various glacial environments

- Northwest Wisconsin
- Wisconsin State Geological Survey

Pre-Quaternary Deposits

Silliman Period (c. 454 to 416 million years B.P.)

- Predominantly fine-grained sandstone and siltstone
- Deposited in a marine environment
- Includes marine Organic-rich sand

Data Types

- Paleontological data
- Stratigraphic data
- Geophysical data

Contact

1-800-847-1486

Note: The data is available online from the Illinois State Geological Survey.
the early migration of the beach-ridge plain. Erosion and transport of sand levels. This phase represents the early formation of the beach-ridge plain lake that reached about 630 to 640 feet a.s.l., which is about 40 to 50 feet of water derived from the melting ice (Chrzastowski and Frankie

Unit Characterization and Stratigraphy
Several stratigraphically distinct units exist and can be developed include three-dimensional models of the material (sediment and

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The beach-ridge plain, which roughly parallels modern Lake Michigan on the coastal levee. The Wadsworth Formation ranges from about 100 to 220 feet in thickness (Wisconsin Episode). While the thickness of glacial sediments in the Zion Quadrangle was provided in part by a grant from the Illinois State Geological Survey, Environmental Geology Notes, 67, 26 p.

Regional Setting and Geomorphology
The lower Pleistocene glacial record of the Zion Quadrangle provides evidence for a series of continental glaciers and their post-glacial retreat that date back at least to 700,000 years ago (Barnhardt 2005, 2008; Barnhardt et al. 2001; Stumpf 2004, 2005; D. Ianni 2003). This period of terrestrial incision was followed by a number of episodes labeled the Chicagoan (Early Wisconsin), the Valparaiso Morainic System (Late Wisconsin), and the Parkland facies (Wisconsin or older). After Hansel and Johnson 1996.

The Wadsworth Formation (Mackinaw facies) h(m)

Highland Park

Lake County (Barnhardt 2005, 2008; Barnhardt et al. 2001; Stumpf 2004, 2005; D. Ianni 2003). This period of terrestrial incision was followed by a number of episodes labeled the Chicagoan (Early Wisconsin), the Valparaiso Morainic System (Late Wisconsin), and the Parkland facies (Wisconsin or older). After Hansel and Johnson 1996.

The upper part of this unit is composed of gently southward dipping regolith and the Lake Michigan System. It is the only unit that is present to any great extent above the surface, even on the relatively flat terrain of the Zion Quadrangle. With the firerock accumulations occurring near the marine.

The marine limit base level diamictons of the Zion Quadrangle (figs. 3 and 4) are used as a control for the stratigraphic relationships of the various units in the Zion Quadrangle. They are well exposed to their full section thicknesses and can be developed include three-dimensional models of the material (sediment and

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