

Surficial Geology of the Davenport West (Iowa) 7.5' Quadrangle

SURFICIAL GEOLOGY OF THE DAVENPORT WEST 7.5' QUADRANGLE, SCOTT COUNTY, IOWA

Iowa Geological Survey
Open File Map OFM-09-06
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prepared by

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LEGEND

CENOZOIC

QUATERNARY SYSTEM

HUDSON EPISODE

Qal - **Alluvium** (DeForest Formation-Undifferentiated) Variable thickness of less than 1 to 5 m (3-16 ft) of very dark gray to brown, noncalcareous to calcareous, stratified silty clay loam, clay loam, loam to sandy loam alluvium and colluvium in stream valleys, on hill slopes and in closed depressions. May overlie Glasford Formation glacial till or Noah Creek Formation. Associated with low-relief modern floodplain, closed depressions, modern drainageways or topsoil positions on the landscape. Seasonal high water table and potential for frequent flooding.

Qaf - **Alluvial fan** (Carrington Mbr.) Variable thickness of 2 to 5 m (7-16 ft) of dark brown to yellowish brown, noncalcareous, silt loam to loam with interbedded lenses of fine sand and silts. A pebble lag is commonly found at or near the fan surface. Overlies sand and gravel of the Henry Formation. Steep angled fans at the base of low order drainages and colluvial slopes along the northern margin of the Mississippi River Valley.

WISCONSIN EPISODE

Qpt - **Loess Mantled Terrace** (Peoria Formation -silt and/or sand facies) 2 to 7 m (7-23 ft) of yellowish brown to gray, massive, jointed, calcareous or noncalcareous, silt loam and intercalated fine to medium, well sorted, sand. May grade downward to poorly to moderately well sorted, moderately to well stratified, coarse to fine feldspathic quartz sand, loam, or silt loam alluvium (Late Phase High Terrace) or may overlie a Farmdale Geosol developed in Roxanna Silt which in turn overlies a well-expressed Sangamon Geosol developed in poorly to moderately well sorted, moderately to well stratified, coarse to fine sand, loam, or silt loam alluvium (Early Phase High Terrace).

Qptep - **Early Phase High Terrace (EPHT)** (Peoria Formation-silt and/or sand facies) 2 to 7 m (7-23 ft) of yellowish brown to gray, massive, jointed, calcareous or noncalcareous, silt loam and intercalated fine to medium, well sorted, sand. The Peoria deposits overlie a Farmdale Geosol developed in the Pregelb Formation which in turn overlies a well-expressed Sangamon Geosol developed in poorly to moderately well sorted, moderately to well stratified, coarse to fine sand, loam, or silt loam alluvium.

Qhm - **Qhm Outwash Sand and Pebble Sand** (Henry Formation, Muscatine Mbr.) coarse to fine sand and pebbly sand mantled with up to 1.5 m (5 ft) of eolian sand, Kingston Terrace complex in the Mississippi Valley.

Qhs - **Qhs - Outwash Sand and Pebble Sand** (Henry Formation, Sabula Mbr.) coarse to fine sand and pebbly sand mantled with up to 5 m (16 ft) of eolian sand, Savanna Terrace complex in the Mississippi Valley.

Qpsb-gla - **Thick Loess** (Peoria Formation-silt facies) Generally 5 to 15 m (16-49 ft) of yellowish to grayish brown, massive, jointed calcareous or noncalcareous silt loam to silty clay loam. Overlies massive, fractured, clay loam glacial till of the Glasford Formation with or without intervening clayey Farmdale Geosol. This mapping unit encompasses upland divides, ridgetops and convex sideslopes. Well to somewhat poorly drained landscape.

Qps1b-gla - **Thick Loess and Intercalated Eolian Sand** (Peoria Formation-silt facies) 5 to 15 m (16-49 ft) of yellowish brown to gray, massive, noncalcareous grading downward to calcareous silt loam and intercalated fine to medium, well sorted, sand. Minimum thickness of 5 m (16 ft) on uplands. Maximum thickness of 2-7 m (7-23 ft) of loess occurs on adjacent slopes. Overlies massive, fractured, loamy glacial till of the Illinoian Glasford Formation with or without intervening clayey Farmdale-Sangamon Geosol.

ILLINOIS EPISODE

Qgla - **Till** (Glasford Formation) Generally 10 to 35 m (33-115 ft) of very dense, massive, fractured, loamy glacial till of the Illinoian Glasford Formation with or without a thin loess mantle (Peoria Formation-less than 2 m) and intervening clayey Farmdale-Sangamon Geosol. Uppermost till may be reworked (associated with the Iowa Surface). This mapping unit encompasses narrowly dissected interfluvial and side slopes, and side valley slopes. Drainage is variable from well drained to poorly drained.

PRE-ILLINOIS EPISODE

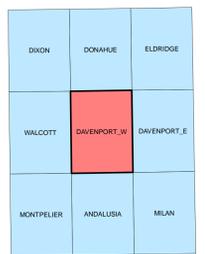
Qwa3 - **Till** (Wolf Creek or Alburnett Formations) Generally 10 to 35 m (33-115 ft) of very dense, massive, fractured, loamy glacial till of the Wolf Creek or Alburnett formations with or without a thin loess mantle (Peoria Formation-less than 2 m) and intervening clayey Farmdale-Sangamon Geosol. This mapping unit encompasses narrowly dissected interfluvial and side slopes, and side valley slopes. Drainage is variable from well drained to poorly drained. This unit is shown only in the cross section.

PALEOZOIC

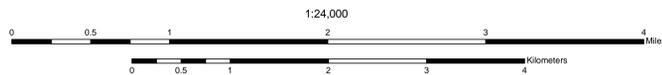
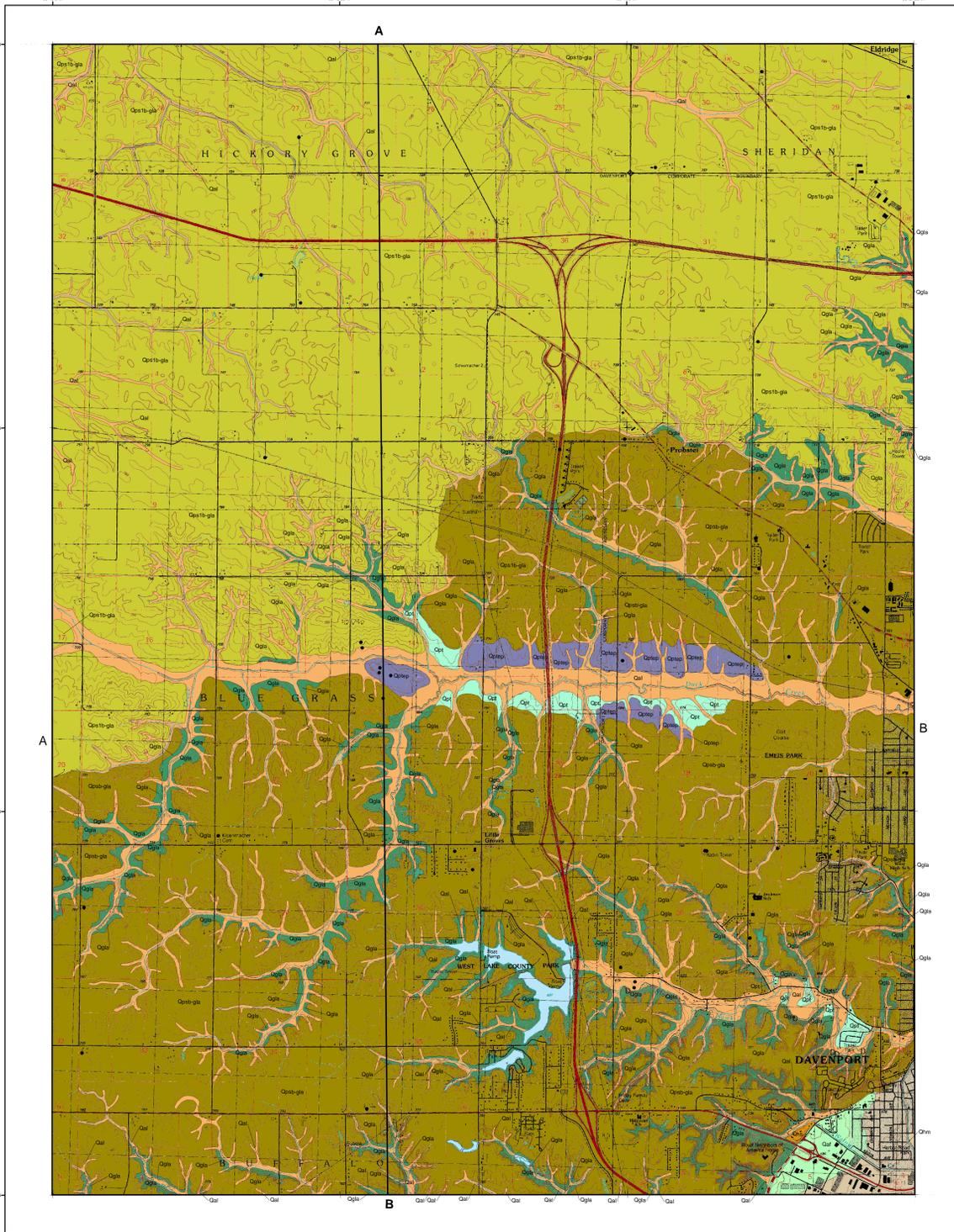
Su-Du-Pu - Undifferentiated Silurian, Devonian and Pennsylvanian bedrock. Primarily shale, dolomite and limestone.

- Drill Holes
- D Bedrock Outcrops

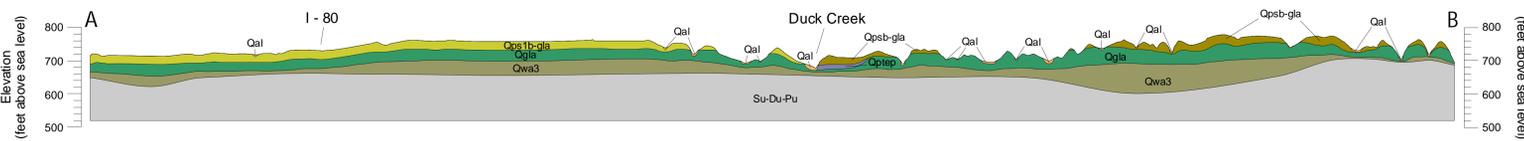
Adjacent 7.5' Quadrangles



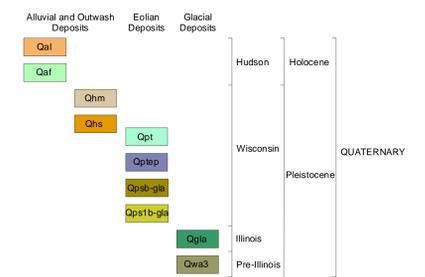
Location Map



GEOLOGIC CROSS-SECTION A-B



Correlation of Map Units



Base map from USGS Davenport West 7.5' Digital Raster Graphic (IGS GIS file DRGQ49.TIF) which was scanned from the Davenport West 7.5' Topographic Quadrangle map, published by US Geological Survey in 1991. Topographic contours and land features based on 1986 aerial photography, field checked in 1991. Land elevation contours (10' interval) based on NGVD 1929.

Iowa Geological Survey digital cartographic file DavenportWestquadr_surficial09.mxd, version 6/18/09 (ArcGIS 9.2). Map projection and coordinate system based on Universal Transverse Mercator (UTM) Zone 15, datum NAD83.

The map and cross section are based on interpretations of the best available information at the time of mapping. Map interpretations are not a substitute for detailed site specific studies.