

# Surficial Geology of the Bennett (Iowa) 7.5' Quadrangle

## COOPERATIVE MAPPING WITH THE NATURAL RESOURCE CONSERVATION SERVICE (NRCS) SURFICIAL GEOLOGIC MAPS OF THE ROCHESTER AND BENNETT 1:24,000 QUADRANGLES PHASE 1

Iowa Geological Survey  
Open File Map OFM-06-4  
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prepared by

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### LEGEND

#### Description of Map Units

##### Cenozoic

##### Quaternary System

##### Hudson Episode

**Qal - Alluvium (DeForest Formation-Undifferentiated)** Variable thickness less than 1 to 5 meters (3 to 16 feet) of very dark gray to brown, micaceous to calcareous, stratified silty clay loam, clay loam, loam to sandy loam alluvium and calcareous to silty sand, on hill slopes and in closed depressions. May overlie Pre-Illinoian glacial till (Wolf Creek or Albion formations) or Noah Creek Formation sand and gravel. Associated with low-reflect modern floodplain, closed depressions, modern drainageways or seepage positions on the landscape. Seasonal high water table and potential for frequent flooding.

##### Wisconsin Episode

**Qplp - Late Phase High Terrace (LPHT)** (Pocahontas Formation-silt and/or sand facies) Two to seven meters (6 to 23 ft) of yellowish brown to gray, massive, jointed, calcareous or noncalcareous, silt loam and interbedded fine to medium, well sorted, sand. Grades downward to poorly to moderately well sorted, moderately to well stratified, coarse to fine feldspathic quartz sand, loam, or silt loam alluvium.

**Qpl - Loam** (Pocahontas Formation-silt facies) Generally 2 to 8 m (6 to 25 ft) of yellowish to grayish brown, massive, jointed calcareous or noncalcareous silt loam to silty clay loam. Overlies a grayish brown to olive gray silty clay loam to silty clay (Pugh Formation -eroded Farmdale Gessell) which is less than 13 m (43 ft) thick. The Farmdale Gessell appears to have been disturbed by periglacial action and was welded to an older Sangamon Gessell developed in loamy glacial silt of the Wolf Creek or Albion formations. This mapping unit encompasses optical druses, edgemoor and corvus subtypes. Well to somewhat poorly drained landscape.

**Qps1 - Loam and Interbedded Yellow Sand** (Pocahontas Formation-silt facies) Two to ten meters (6 to 33 ft) of yellowish brown to gray, massive, fractured, noncalcareous grading downward to calcareous silt loam and interbedded fine to medium, well sorted, sand. Sand is most abundant in lower part of the section package - column diameters 0.5 to 2.5 to (1.6 to 8 ft) thick may be present at the base of the unit. Overlies massive, fractured, loamy glacial till of the Wolf Creek or Albion formations with or without intervening clayey Farmdale-Sangamon Gessell.

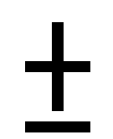
##### Pre-Illinoian Episode

**Qwa3 - Till (Wolf Creek or Albion formations)** Generally 10 to 35 m (33 to 115 ft) of very dense, massive, fractured, loamy glacial till of the Wolf Creek or Albion formations with or without a thin loess mantle (Pocahontas Formation - less than 2 meters (6 ft) and intervening clayey Farmdale-Sangamon Gessell. This mapping unit encompasses narrowly dissected interfluvial and side slopes, and side valley slopes. Drainage is variable from well drained to poorly drained.

##### Paleozoic Bedrock

**Sg - Silurian Gessell Formation - Laminated or rounded detrital, mound facies may have steeply dipping beds.**

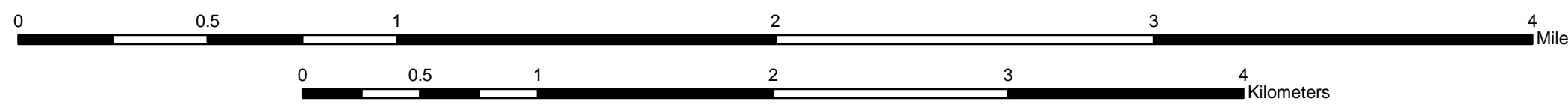
##### Water Features



#### Quadrangle Location



1:24,000



Base map from USGS Bennett 7.5' Digital Raster Graphic (IGS GIS file DRGP47.TIF) which was scanned from the Bennett 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 1988. Land elevation contours (10' interval) based on NGVD 1929.

Iowa Geological Survey digital cartographic file Bennettquad06.mxd, version 6/28/06 (ArcGIS 9.0). Map projection and coordinate system based on Universal Transverse Mercator (UTM) Zone 15, datum NAD83.

#### Adjacent 7.5' Quadrangles

