

SURFICIAL GEOLOGIC MAPS **OF DEVELOPING AREAS IN IOWA** Phase 2: Iowa City West and Tiffin 7.5' Quadrangles

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LEGEND

Description of Map Units

HUDSON EPISODE

Qallt - Iowa River Valley-Low Terrace (DeForest Formation-Camp Creek Mbr. and Roberts Creek Mbr.) Variable thickness of less than 1 to 5 meters of very dark gray to brown, noncalcareous, stratified silty clay loam, loam, or clay loam, associated with the lowest terrace level of the Iowa River valley. Overlies Noah Creek Formation. Ox -bow lakes and meander scars are common features associated with this terrace level. Post settlement alluvium thickness varies from .5 meter in higher areas to 2 meters along the river Qalit - Iowa River Valley-Intermediate Terrace (DeForest Formation-Camp Creek Mbr., Roberts Mbr. and Gunder Mbr.) Variable thickness of less than 1 to 5 meters of very dark gray to brown, noncalcareous, stratified silty clay loam to loam that overlies Noah Creek Formation. Occupies low terrace position. Seasonal high water table and frequent Qalitht - Iowa River Valley-Intermediate-High Terrace (DeForest Formation- Gunder Mbr.) Variable thickness of less than 1 to 7 meters of very dark gray to brown, noncalcareous, silty clay loam, loam alluvim or colluvium that overlies Noah Creek Formation. Few eolian dunes composed of Peoria Formation—sand facies maybe located on the terrace surface. Seasonal high water table and frequent flooding potential.

loam, loam alluvium or colluvium. Overlies Noah Creek Formation. Eolian dunes composed of Peoria Formation—sand facies are common on the terrace surface. Occupies terrace position 2 to 3 meters above the modern floodplain. This unit may represent a complex of intermediate -high terrace sediments. Seasonal high water table. WISCONSIN EPISODE

Qnw – Sand and Gravel (Noah Creek Formation) More than three meters of yellowish brown to gray, poorly to well sorted, massive to well stratified, coarse to fine feldspathic quartz sand, pebbly sand and gravel. In places mantled with one to three meters of fine to medium, well sand derived from wind reworking of the alluvium. This unit encompasses deposits that accumulated in stream valleys during the Wisconsin Episode. **Optip - Late Phase High Terrace (LPHT)** (Peoria Formation-silt and/or sand facies) Two to seven meters of yellowish brown to gray, massive, jointed, calcareous or noncalcareous, silt loam and intercalated fine to medium, well sorted, sand. Grades downward to poorly to moderately well sorted, mode rately to well stratified, coarse to fine Qptep - Early Phase High Terrace (EPHT) (Peoria Formation-silt and/or sand facies) Two to seven meters of yellowish brown to gray, massive, jointed, calcareous or ncalcareous, silt loam and intercalated fine to medium, well sorted, sand. The Peoria deposits 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 alluv ium. **Qps1 - Loess and Intercalated Eolian Sand** (Peoria Formation-silt facies) Two to five meters of yellowish brown to gray, massive, fractured, noncalcareous grading downward to calcareous silt loam and intercalated fine to medium, well sorted, sand. Sand is most abundant in lower part of the eolian package. Overlies massive, fractured, loamy glacial till of the Wolf Creek or Alburnett formations with or without intervening clayey Farmdale /Sangamon Geosol. Qps1b - Thick Loess and Intercalated Eolian Sand (Peoria Formation-silt facies) Five to fifteen meters of yellowish brown to gray, massive, noncalcareous grading downward to calcareous silt loam and intercalated fine to medium, well sorted, sand. Minimum thickness of five meters on uplands. Maximum thickness of two to seven meters of loess occurs on adjacent slopes. Overlies massive, fractured, loamy glacial till of the Wolf Creek or Alburnett formations with or without intervening clayey Farmdale **Qps2 - Eolian Sand and Intercalated Silt** (Peoria Formation-sand facies) Five to fifteen meters of yellowish brown to gray, moderately to well stratified noncalcareous or calcareous, fine to medium, well sorted, eolian sand. May contain interbeds of yellowish brown to gray, massive, silt loam loess. Overlies eroded, massive, fractured, loamy glacial till of the Wolf Creek or Alburnett formations or fractured D evonian- age carbonate bedrock. **Qps7 - Loess** (Peoria Formation-silt facies) Two to five meters of yellowish brown to gray, massive, fractured, noncalcareous grading downward to calcareous silt loam. This unit is very uniform and sands are rarely present. Overlies massive, fractured, firm, loamy glacial till of the Wolf Creek or Alburnett formations.

Qwa2 - Loamy and Sandy Sediment Shallow to Glacial Till (Unnamed erosion surface sediment) One to three meters of yellowish brown to gray, massive to weakly stratified, well to poorly sorted loamy, sandy and silty erosion surface sediment. Map unit includes some areas mantled with less than two meters of Peoria Silt (loess). Overlies massive, fractured, firm glacial till of the Wolf Creek and Alburnett formations. Seasonally high water table may occur in this map unit. PRE-ILLINOIS EPISODE

Paleozoic Du – Fractured Devonian Carbonate Bedrock—Primarily Cedar Valley Group limestones and minor areas of Lime Creek Formation—green gray shale. The Cedar Valley

Qf - Fill Areas cut and fill associated with major highways, airports and retail and industrial developments. Deposits within this map unit are similar to those in adjacent map units but may have significant mantles of fill or deep cuts that expose underlying deposits. Less extensive deposits occur along all roads and in develope d areas throughout the

LOCATION OF MAPPED AREA