Map Unit Descriptions:

water- water

K - Cretaceous sedimentary rocks of the Carlile, Dakota, Greenhorn-Graneros, Niobrara, and Pierre Formations. The northwest panhandle units consist dominantly of residuum on upper Cretaceous smectitic shales with smaller areas of Quaternary alluvium and colluvium derived from weathered shale. The northeast units near the confluence of the Niobrara and Platte rivers consist dominantly of residuum and colluvium on upper Cretaceous smectitic shales with localized areas of thin Neogene and Quaternary fluvial and eolian sands and loess. The southern units along the Republican River consist of residuum of the Carlile and Niobrara formations, while the units along the Little Blue River consist of residuum of the Dakota and Greenhorn-Graneros formations overlain by Peoria and other loess deposits of varying thicknesses.

\*P – Sedimentary rocks of the Pennsylvanian Shawnee and Wabaunsee Groups and Permian Admire, Chase, and Council Grove groups. Primarily limestone and shale.

T - Undivided Tertiary bedrock of the Broadwater Fm and the Arikaree, Ogallala, and White River Groups.

Ta – Sedimentary rocks of the Arikaree Group. Primarily fluvial and eolian volcaniclastic sediments.

Tb – Sedimentary rocks of the Broadwater Formation. Primarily pebble to cobble gravel and sand. Locally includes minor silt, clay, and diatomite beds.

To – Sedimentary rocks of the Ogallala Group. Primarily fluvial deposits that commonly fill paleovalleys.

Twr – Sedimntary rocks of the White River Group. Primarily fluvial and eolian volcaniclastic sediments generally finer grained than those of Arikaree Group.

Qal - Sand, gravel, and silt to clay alluvial deposits in active channels and floodplains and in low-terrace deposits along major rivers

Qat1 - Commonly gravel and sand in deposits on alluvial terraces, but locally includes thin beds of silt and minor lacustrine deposits

Qat2 - Commonly gravel and sand deposited on alluvial terraces

Qca - Residuum primarily derived from upper Eocene to Pliocene sediments and sedimentary rocks with sand, silt, and minor gravel deposited by minor alluvial and colluvial processes. Principally located on broad valley slopes in the western portion of the state.

QTal - Gravel and coarse sand with minor alluvial silt and lacustrine deposits

Qt - Illinoian and Pre-Illinoian alluvial and lucustrine sand and Pre-Illinoian clay loam till. Locally with intervening Illinoisan loess or other sediments

Ql - Silt and sandy silt primarily comprised of quartz grains deposited by wind. Widespread Peoria Loess (Wisconsinan) with: (1) local Bignell Loess (Holocene), particularly adjacent to dunefields and sand sheets in central and western Nebraska; and/or (2) local exposures of Loveland Loess (Illinoisan), typically in lower slope positions, especially in parts of eastern, central and southern Nebraska.

Qles - Eolian sediments consisting of distinct pockets of both loess and sand. Sands are overlying loess deposits in places. Loess is primarily Peoria Loess.

Qes - Eolian sands, undifferentiated morphologically

Qes-bw - Eolian sands, consisting of wide-spaced, crescentic barchan morphologies

Qes-bi - Eolian sands, consisting of intermediate-spaced, crescentic barchan morphologies

Qes-bc - Eolian sands, consisting of close-spaced, crescentic barchan morphologies

Qes-bb - Eolian sands, consisting of barchanoid-ridge, crescentic barchan morphologies

Qes-dr - Eolian sands, consisting of domal-ridge morphologies

Qes-dcc - Eolian sands, consisting of dome-like, compound and complex morphologies

Qes-dsc - Eolian sands, consisting of dome-like, simple and complex morphologies

Qes-l - Eolian sands, consisting of linear morphologies

Qes-p - Eolian sands, consisting of parabolic morphologies

Qes-sv - Eolian sands, consisting of sand sheet, very low relief morphologies

Qes-sm - Eolian sands, consisting of sand sheet, moderate relief morphologies