Introduction to the Surficial Geology of Cerro Gordo County, Iowa

Surficial geology is the study of the thin layer of soil and weathered rock that covers the Earth's surface. In Cerro Gordo County, Iowa, the surficial geology is primarily composed of alluvial deposits, which are sedimentary deposits formed by the action of water, wind, or ice. These deposits are typically unconsolidated and can vary in composition depending on the source material and the environment in which they were deposited.

Alluvium

Alluvium is a type of sedimentary deposit that forms in valleys and floodplains where streams and rivers deposit their load of sediments. Alluvial deposits can consist of a variety of materials, including sand, silt, clay, and organic debris. The thickness of alluvial deposits can vary greatly, with some areas having less than 1 meter of alluvium, while others may have deposits up to 10 meters thick.

In Cerro Gordo County, alluvial deposits are typically found in valleys and floodplains along the Winnebago River and its tributaries. These deposits are composed of a mixture of sand, silt, and clay, and may contain small amounts of organic material.

Sand and Gravel

Sand and gravel deposits are typically found in areas where streams and rivers have eroded underlying bedrock and deposited the resulting sediments. These deposits are typically composed of angular to sub-rounded gravel, sand, and silt, and may contain small amounts of organic material.

In Cerro Gordo County, sand and gravel deposits are typically found in valleys and floodplains along the Winnebago River and its tributaries. These deposits are composed of a mixture of sand, silt, and gravel, and may contain small amounts of organic material.

Eolian Sands and Gravel

Eolian sands and gravel deposits are formed by the wind and are typically found in areas with dunes, sandhills, and other landforms created by wind erosion. These deposits are composed of well-sorted sand and gravel, and may contain small amounts of organic material.

In Cerro Gordo County, eolian sands and gravel deposits are typically found in areas with dunes and sandhills, such as the Tabor Dunes and the Emerson Dunes.

LEGEND

- Amethyst: Amethyst is a type of quartz that is often used in jewelry. It is typically found in metamorphic rocks and can have a wide range of colors, from pale pink to deep purple.

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- Other Mappings: Other mappings may include additional data layers that are not shown in the legend.

CONTOURS

- Contour lines: Contour lines are used to represent the elevation of the terrain. The closer the contour lines are together, the steeper the slope.

- Elevations: Elevations are shown in feet above sea level (fasl). The map shows elevations ranging from 0 to 1,300 feet above sea level.

- Relief: Relief is the difference between the highest and lowest points on a map. The map shows relief ranging from 0 to 1,300 feet.

- Slope: Slope is the steepness of the terrain. The map shows slopes ranging from 0% to 50%.

- Slope Aspect: Slope aspect is the direction in which the slope faces. The map shows slope aspect ranging from 0° to 360°.

- Soil Cat: Soil Cat is a category that represents different types of soil. The map shows soil cat ranging from A to E.

- Other Features: Other features may include additional data layers that are not shown in the legend.