PHYSIOGRAPHY

The Missouri portion of the Elsah 7.5' quadrangle includes part of the floodplain between the Missouri and Mississippi rivers. The floodplain is greater than four miles wide in the area with the distance between the rivers narrowing to less than two miles on the quadrangle. The quadrangle lies within the Dissected Till Plains Section of the Central Lowland Province of the Interior Plains Physiographic Division. The lowest recorded elevation of just under 420 feet mean sea level (msl) occurs along the edge of the Mississippi River. The highest elevation on the Missouri portion of the map in St. Charles County, the Central Lowland Province of the Interior Plains Physiographic Division. The lowest recorded elevation of just under 420 feet msl south of the Mississippi River in the south-central portion of the quadrangle. Total relief on the Missouri portion of the Elsah 7.5' quadrangle is approximately 26 feet.

DESCRIPTION OF MAP UNITS

ARTIFICIAL FILL - This unit comprises artificially embanked fill material and is composed of a mixture of heterogeneous clay, silt, sand and gravel in various quantities. This unit may reach 40 feet in total thickness and comprise the material for highway and railroad beds, and waste-water treatment facility fills. This artificial fill has typically been placed on unembanked materials.

QUATERNARY CLAY-CAPPED ALLUVIUM - This unit has been deposited by the Missouri and Mississippi rivers. The approximate upper 15 feet of these deposits are comprised predominantly of clay with variable amounts of silt and organic material. The material residing below the clay is predominantly sand. In the Missouri portion of the map in St. Charles County, the thickness of this unit reaches 120 feet between the large rivers. The water table is approximately 15 feet below ground surface, resulting in an interval of saturated sand greater than 100 feet thick. This unit is included in the cross section as Quaternary alluvium.

QUATERNARY SILT-CAPPED ALLUVIUM - This unit has been deposited by the Missouri and Mississippi rivers. The approximate upper 15 feet of these deposits are comprised predominantly of silt with variable amounts of clay and organic material. The material residing below the silt is predominantly sand and gravel in various quantities. In the Missouri portion of the map in St. Charles County, the thickness of this unit reaches 120 feet between the large rivers. The water table is approximately 15 feet below ground surface, resulting in an interval of saturated sand greater than 100 feet thick. This unit is included in the cross section as Quaternary alluvium.

QUATERNARY ALLUVIAL SAND - This unit has been deposited by the Missouri and Mississippi rivers. The composition of this unit is predominantly sand with variable amounts of clay, silt and organic material. The thickness of this unit reaches 120 feet between the large rivers. The water table is approximately 15 feet below ground surface, resulting in an interval of saturated sand greater than 100 feet thick. This unit is included in the cross section as Quaternary alluvium.

BIBLIOGRAPHY


Travis Carr, Vicki Dove and Edith Starbuck

ACKNOWLEDGEMENTS

The authors would like to recognize the assistance of Alz-Aitch and Uchehia Aboza with Missouri University of Science and Technology for their hard work collecting and processing geophysical seismic data and the assistance of the viewer’s graphic staff Mark Gordon and Hylen Beckner, who helped with the production of the map.