Conservation and Survey Division



Associate Director for Conservation and Survey and State Geologist *R.M. (Matt) Joeckel, 2014-present*



Mission

The Conservation and Survey Division (CSD), the natural resource survey component of the School of Natural Resources, is a unique, multi-disciplinary research, service and data-collection organization established by state statute in 1921. CSD's mission is to investigate and

The Conservation and Survey Division is Nebraska's unique geological, water, and soil survey established by state statute in 1921. It continues the long tradition of a state geological survey (since 1893) and a state geologist (since 1871), both affiliated with the University of Nebraska-Lincoln.

Today, CSD investigates the geology, mineral resources, soils, water, and landscapes of Nebraska. It archives important data and collections, analyzes and objectively interprets geological information, and makes both data and scientific results available to stakeholders. CSD personnel also engage in formal classroom teaching as well as activities that provide continuing education units for professionals. CSD personnel apply cutting-edge technologies, including remote telemetry-based automated water level recorders, digital mapping, computed tomography, airborne electromagnetics, ground-penetrating record information about Nebraska's geologic history, its rock and mineral resources, the quantity and quality of its water resources, land cover and other aspects of its geography, as well as the nature, distribution and uses of its soils.

radar, unmanned aircraft systems, 3-D geological modeling, thermal and isotopic tracers, and optical age dating of sediments, in fulfilling their collective mission.

CSD issues a comprehensive Nebraska Statewide Groundwater-Level Monitoring Report yearly. It also produces new GIS-based digital geologic maps every year as a part of the U.S. Geological Survey's STATEMAP Cooperative Geological Mapping Program. CSD has engaged in geologic test-hole drilling in Nebraska since the 1940s, and it continues to drill and log thousands of feet of new test holes each year to support research and aid in assessing the state's natural resources. Resulting data are made available to stakeholders in an online database that includes approximately 6,000 test holes. Furthermore, CSD collects, curates, archives, and analyzes cores, cuttings, and associated data from more than 17,000 oil and gas wells.



http://csd.unl.edu

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Geological Survey

CSD geologists conduct basic geologic research relevant to Nebraska and the world. They engage in geologic mapping and research on the surface and subsurface geology of Nebraska and the enclosing region. They evaluate mineral and water resources through test-hole drilling, the collection of geophysical data, and laboratory analyses. Work conducted by CSD scientists provides the basis for effective resource management and use, water resource safety and security, the exploration and exploitation of industrial mineral and fuel resources, natural-hazard mitigation, and buildingsite evaluation. CSD archives and disseminates a wide variety of geological and hydrogeological data. It also maintains an extensive core and sediment sample inventory.

Water Survey

CSD studies many aspects of Nebraska's groundwater, including quality, quantity, and connections between aquifers and surface water. CSD's groundwater-level monitoring program has amassed an archive of data from more than 5,000 active observation wells. Its test hole drilling program has produced geologic data, cuttings, and core from nearly 6,000 test holes. CSD also evaluates data for the Nebraska Quality-Assessed Agrichemical Contaminant Database. This data allows CSD scientists to provide expertise, products, data, and services to government agencies, industries, and individuals in Nebraska and beyond and is intrumental to managing the state's water resources. CSD has long been a partner with Nebraska's Natural Resources Districts. Our expertise is sought after internationally.





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