The Sheldon Creek glacial advance is only exposed in a limited part of the state on the Northwest Iowa Plains and Iowan Surface landform regions. On Day 1, riders will cross onto the Sheldon Creek till plain between the towns of Boyden and Sheldon. Riders will be on the Sheldon Creek till plain until approximately nine miles west of Milford when they will ride onto the Des Moines Lobe. Riders will again cross the Sheldon Creek Formation till on Day 5 from Clear Lake across much of Cerro Gordo County and into Floyd County. Recent mapping studies in Worth and Cerro Gordo counties indicate that the Sheldon Creek boundary extends farther east than previously documented.

Early- and mid-Wisconsin-age ice advances, dating from approximately 40,000 to 26,000 years before present, deposited glacial sediments throughout north-central Iowa. Sheldon Creek Formation tills generally consist of yellowish brown to gray, calcareous fractured to massive clay loam. At depth this unit can be variably textured and contain significant sand and gravel bodies. Pierre Shale clasts may also be present. This unit overlies the much older Pre-Illinois glacial tills and may be mantled with loess (wind-blown silt) deposits.

Human and Natural History Partners

For the ninth year the Iowa Geological Survey (IGS), the U.S. Geological Survey (USGS), and the University of Iowa Office of the State Archaeologist (OSA) returns as “Human and Natural History Partners”. Archaeology on the Road highlights the unique cultural history and prehistory of Iowa on the RAGBRAI route, pointing out interesting and significant archaeological sites and sharing Iowa’s past along the way. Keep an eye out for “Team Archaeology” riders throughout the week and online. Learn about the Land provides daily brochures describing interesting landscape, geologic, and other natural historical features and factoids along the RAGBRAI trail. Look for USGS volunteers as they distribute the Learn about the Land brochures in RAGBRAI campgrounds.

Special thanks to the Iowa Limestone Producers Association (ILPA) for assisting in the production of the Learn about the Land daily brochures. With their help, we are able to provide interesting information about one of Iowa’s greatest natural resources… limestone!
As drought conditions engulfed much of Iowa recently, concerns of shallow groundwater availability surfaced. The IGS has placed an emphasis on studying shallow groundwater availability in northwest Iowa, a region hit especially hard by a lack of precipitation and aquifer recharge. Electrical Resistivity (ER) geophysics is helpful in identifying aquifer parameters that assist in groundwater modeling efforts. An ER investigation was completed near the town of Sheldon, Iowa, as part of the Floyd River alluvial aquifer characterization and assessment. Results from the survey located areas of groundwater-bearing sands and gravels (warm colors in image below). Several additional groundwater availability investigations in northwest Iowa have relied on ER surveys to provide valuable geologic information.