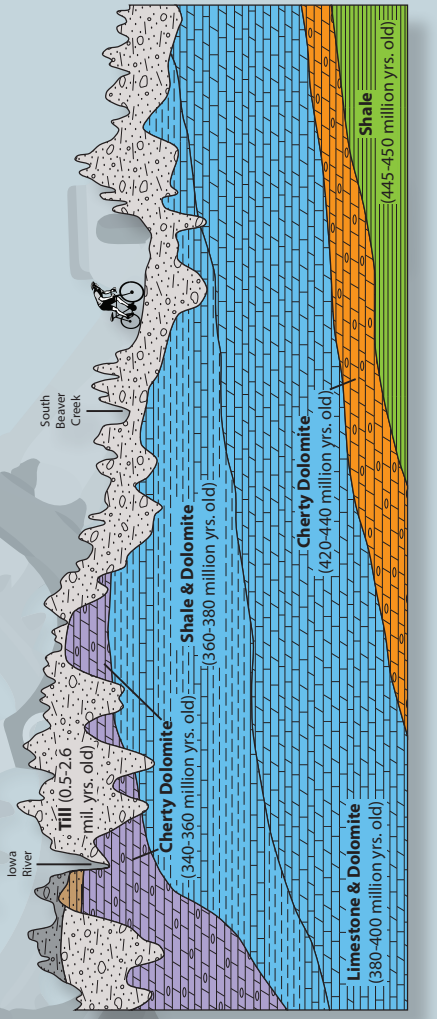
Steamboat Rock

Steamboat Rock gets its name from a sandstone bluff at Fallen Rock State Preserve on the east side of the Iowa River just south of East Main Street on the west end of the town. A 300 foot stretch of sandstone was undercut by river erosion, giving the bluff the shape of the side of a steamboat, topped with a stone projection like a wheelhouse and a smokestack-like pine tree on top. The sandstone is one of the northeastern-most erosional outliers of Pennsylvanian age (~300 million years old) in Iowa. The picturesque sandstone overhangs topped with lush woodland greenery display the erosive power of the Iowa River. Other attractions in this unique geologic setting include Wildcat Cave Access and Pine Lake State Park, both just a skip down river from Steamboat Rock.



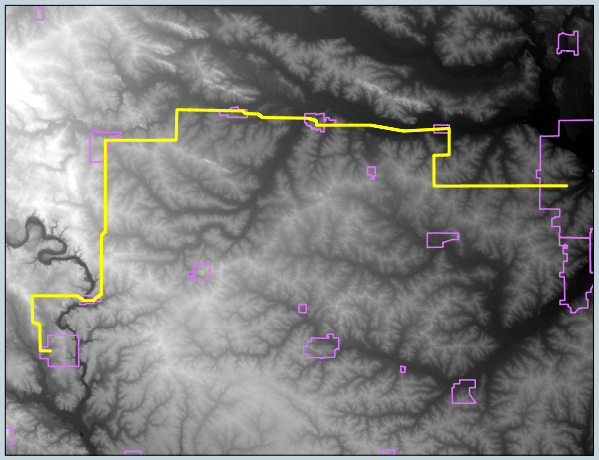
Daily Geology: Riding off the Des Moines Lobe once crossing the Iowa River, you are now entering the Iowan Surface landform region. Glacial deposits vary widely in thickness and composition in this region. The eastern-most erosional outlier of Pennsylvanian-age bedrock is exposed here at Steamboat Rock. The geologic units at the bedrock surface are slightly tilted towards the southwest over much of Iowa. That means that the bedrock units get progressively older as you ride east.

RAGBRAI

Day 4 2015

Wednesday, July 22

Learn About the Land



IOWA GEOLOGICAL SURVEY

IIHR Hydroscience & Engineering

USGS science for a changing world

IOWA LIMESTONE PRODUCERS ASSOCIATION *Your limestone resource since 1945!*

DNR

Land Change Science

Increasing interest in understanding changes on the landscape has led to the emergence of a new field of study, Land Change Science (LCS). Land change scientists develop new concepts, approaches, and tools for improved understanding and management of land resources.

The surface of the earth is a patchwork mosaic of natural and cultural landscapes. Each of these patches is part of a very diverse and interconnected spectrum of landscapes. The mosaic is not static, but regularly shifts due to changes from human activities and natural phenomena.

The U.S. Geological Survey's LCS Program has developed a geospatial database on the Nation's land cover. They are studying long-term changes in land cover associated with climate variability, fire disturbance and changes in management activities. Research efforts include assessing catastrophic hazards (tsunami, earthquakes, and volcanoes) and chronic hazards (coastal erosion, wildfires and sea level rise).

To learn more, visit the USGS Land Change Science Program website:

http://www.usgs.gov/climate_landuse/lcs/

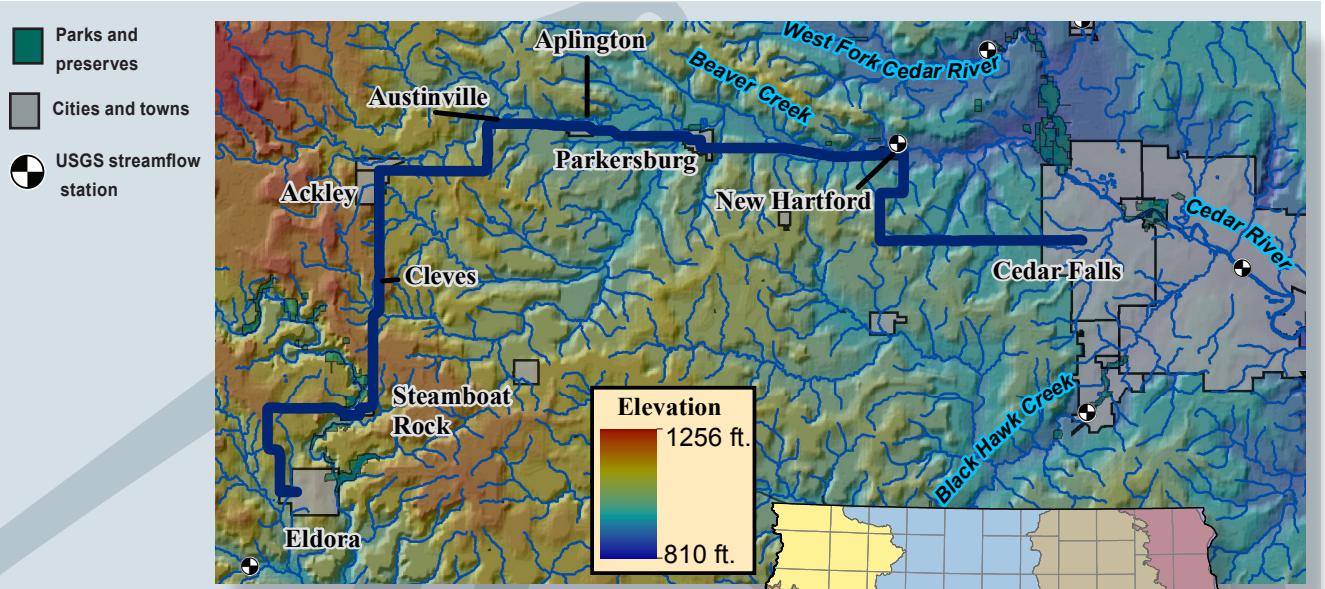
Iowa Rocks!!

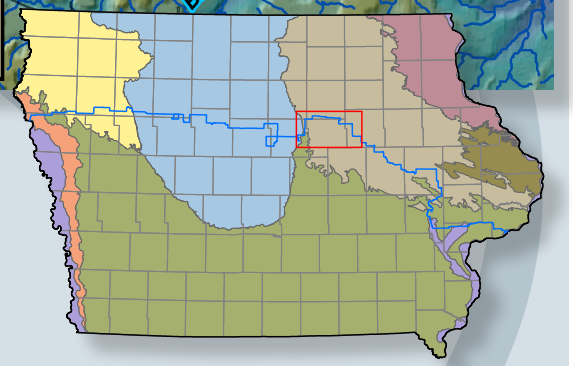
ilpa

Fertilizer Aglime

Partners for Better Yields

For more information contact your local Aglime supplier.





* Cover photo: Digital Elevation Model (DEM) showing topography of the land surface along today's route.

Water Quality in Iowa

Many things affect water quality. They are complex and interconnected, and occur at timeframes of minutes (e.g., flash floods) to decades (e.g., evolving management practices). Landscape use also contributes to the quality of our waters also. In recent years, a major water quality concern has been how much nitrate is transported (load) downstream. Nitrogen is a natural and necessary part of every healthy ecosystem, but too much nitrogen in our rivers, stream, lakes, and estuaries can lead to serious environ¬mental issues.

As you have crossed Iowa's varied terrain, you have probably noticed the USGS streamflow stations. Typically these monitoring stations are best known for providing stage and discharge information. Some of these monitoring stations are also equipped with real-time nitrate sensors. The USGS, in cooperation with numerous local, state (the DNR in Iowa), and federal agencies is currently monitoring real-time nitrate at over 100 stations nationwide, including 14 in Iowa. In the Midwest, this national network provides real-time information which is used by water utilities to make informed drinking-water decisions, and to enhance our understand¬ing of nitrate transport from small streams to large rivers and ultimately to large estuaries, and the Gulf of Mexico.

Real-time data are available online at:

http://waterwatch.usgs.gov/wqwatch