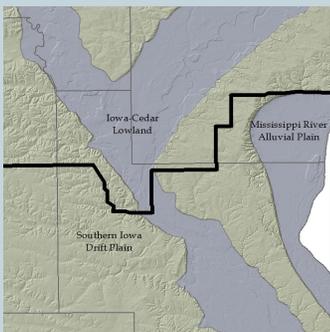


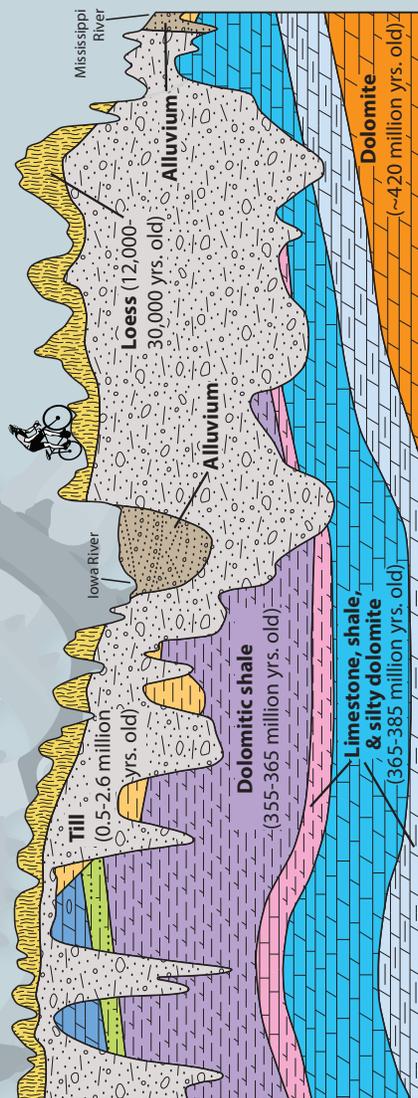
Lake Calvin

The large flat-lying area upstream from the confluence of the Cedar and Iowa rivers in Louisa, Muscatine, Johnson, and Cedar counties was first described as an extinct lake by State Geologist Samuel Calvin in 1874. It was named "Lake Calvin" in his honor in 1899. W.H. Schoewe summarized the "lake's" history in 1919 and reported that it was formed about 130,000 years ago when Illinoian aged glacial ice moved into southeast Iowa, blocking the Mississippi River and backing water up the two river valleys. However, in 1984, Steve Esling reported that extensive drill sampling failed to reveal any substantial lake sediments. He concluded that the landform represented a complex series of river terraces and "Lake Calvin" never really existed. This landform region is now referred to as the 'Iowa-Cedar Lowland'. Riders will traverse 'Lake Calvin' north of Columbus Junction as they ride along county road G40 adjacent to the Cedar River.



Daily Geology:

Today's ride will cross over the Iowa-Cedar Lowland landform region at Columbus Junction where the Iowa and Cedar rivers meet. This region is characterized by thick alluvial deposits and hosts a variety of wetland habitats. The route ends by skirting around the west side of Muscatine, which sits in a large ancient cut-bank of the Mississippi River where the river turned a corner, the water slowed down, and deposited huge amounts of sand. The route crosses the Cleona Channel, a deep bedrock valley that was cut by the ancestral Mississippi River.



RAGBRAI

Day 7

2016

Saturday, July 30

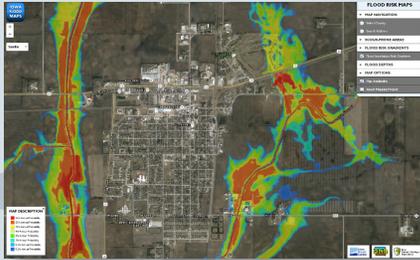
Learn About the Land



Flooding in Iowa

Numerous recorded flood events have occurred throughout Iowa's history. While some have been more devastating than others, the negative effects and recovery time are often long lasting. Iowa was part of the Great Midwestern flood of 1993 and in 2008, Iowa again endured high waters where 85 of 99 counties were presidentially declared disaster areas. What is causing the upswing in flooding events? It is hard to tie this down to one reason; it is a combination of many different factors. Iowa has been working to better understand its flood risks and to make its citizens more aware of these risks. The Iowa Department of Natural Resources (DNR) has partnered with the Iowa State University Extension and Outreach to create a series of informational modules to educate the public about various aspects of flooding, available at <http://www.extension.iastate.edu/floodingiowa>.

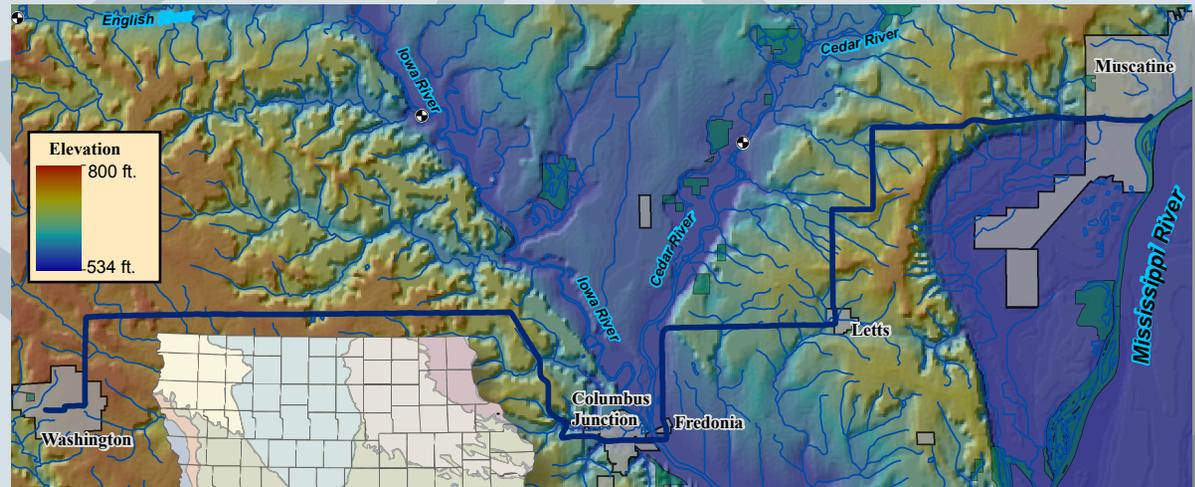
IIHR – Hydroscience & Engineering (IIHR) is at the forefront of efforts to gather and analyze data related to flooding. Since its founding in 1920, IIHR has been working to assess and communicate risks related to flooding and other hydraulic phenomena. Since 2009, the Iowa Flood Center (IFC), a unit of IIHR, has focused on improving flood monitoring and prediction capabilities in Iowa. The IFC's Iowa Flood Information System (IFIS) is a key tool available to the public at no charge. IFIS is a collection of various data sources delivered through a web mapping service. Anyone who is interested can easily retrieve real-time gage data, as well as historical flow information. Visit <http://ifis.iowafloodcenter.org/ifis/en/>.



* Cover photo: Wildcat Den State Park in Muscatine County has great examples of Pennsylvanian aged sandstone.

Floodplain Mapping

The DNR Statewide Floodplain Mapping Project is winding up its sixth and final year. Through a partnership with the Iowa Flood Center, the DNR has been creating flood risk maps to make the residents of Iowa more aware of and resilient to flood risk. This project has used the statewide LiDAR dataset to produce accurate floodplain mapping. IFC researchers have created flood maps which the Federal Emergency Management Agency (FEMA) will use to produce Flood Insurance Rate Maps (FIRMs). The DNR, IFC, and FEMA work together to ensure that quality products are produced for the citizens of Iowa. Through Draft Flood Hazard Map (DFHM) outreach events local officials review maps to ensure all questions are answered and factors considered. To see the progress of this project go to: <http://www.iowadnr.gov/Environmental-Protection/Land-Quality/Flood-Plain-Management/Flood-Plain-Mapping>. A web mapping service used to view this data is available to the public through the internet. In addition to viewing DFHMs, the public can view Flood Risk Management Maps, which have information regarding flooding depth, scour prone areas, and flood risk gradients that show hot spots of potential flooding. These maps, and more information, can be found at www.iowafloodmaps.org.



-  USGS streamflow station
-  Parks and preserves
-  Cities and towns

Geologic Mapping in Iowa

Iowa has been involved in the United States Geological Survey's (USGS) STATEMAP program since 1993. The STATEMAP program supports detailed surficial and bedrock geologic mapping in Iowa. Particular emphasis is placed on addressing environmental and societal issues by providing a sound base of geologic information from which resource decisions can be made. On the final day of RAGBRAI, riders will pass through the first STATEMAP project area in Louisa and Muscatine counties, where the Letts and Blanchard Island quadrangles were mapped. Fundamental questions related to both surficial upland and alluvial mapping units were addressed as part of this project. Iowa has participated in the USGS STATEMAP program since this initial project and currently has bedrock and surficial geologic mapping projects in north-central and southeastern Iowa.

