Iowans are taking proactive steps to prepare for future flooding and mitigate the damages. The U.S. Department of Housing and Urban Development (HUD) provided $8.8 million to the IFC for watershed demonstration pilot projects, with the goal of reducing flood damage. Projects include farm ponds, wetlands, floodplain easements, and more.

IFC researchers will collect data before and after implementing the watershed projects, including precipitation, soil moisture levels, and soil erosion. This data will help Iowans make informed decisions about the implementation, design, and impact of additional watershed projects across the state.

Construction of the projects is underway in four Iowa watersheds, including the Turkey River basin in northeast Iowa.

Iowa Watershed Projects

[QR Code Link]
http://iowafloodcenter.org/projects/watershed-projects/

Garber Water Quality

As you cross the Turkey River in Garber, look downstream and you will see another USGS streamflow gage at the bend in the river. Not only does this gage measure stream stage and discharge, but it also contains instrumentation to provide water quality information. The USGS Cooperative Water Program and the Iowa DNR fund nine such gages as part of the Big Rivers Project – all sites on rivers that flow into the Mississippi and Missouri rivers. The information collected is assessed for nitrate concentrations and loads that are leaving the state. Emerging contaminants and pesticide data are also collected at these sites.

USGS Cooperative Water Program

[QR Code Link]
http://water.usgs.gov/coop/
Algific Talus Slopes

Algific (cold producing) Talus (rock debris) Slopes (ATS) represent an unusual environment particular to portions of the Paleozen Plateau in northeast Iowa. They occur along valleys with steep slopes where fractures are created by blocks of rock slumping downhill into large rock piles. It is thought that during the winter cold air descends through the fractures at the top of the slope then freezes any water that percolated down the fractures to form ice. In cases where the ice stays frozen all year, air flowing through the fractures and into the talus can escape through vents at the base of the talus pile during the spring and summer. These vents create a micro-climate that allows plants and animals that normally only survive further north to exist in Iowa. The Pleistocene Snail and Northern Monkshood are two species that are on the Threatened and Endangered list because they occur only at ATS sites in Iowa or a few other sites in the United States. Due to the fragile nature of the slopes and the species that survive there, the Iowa DNR and US Fish & Wildlife Service are working to protect these areas from development and ensure their survival into the future.

Paleozoic Plateau

Two miles east of Edgewood riders will exit the Iowan Surface and enter the Paleozoic Plateau landform region. The term “Paleozoic” refers to the expanse of geologic time represented by the layers of bedrock exposed in the steep valleys of northeast Iowa. Predominantly limestone and dolomite underlying this region, along with very limited glacial sediment cover, allows for the formation of karst features like sinkholes, caves, and springs. Northeast Iowa was originally termed the “Driftless Area” due to the lack of identified glacial deposits, but subsequent studies disproved this idea, and the more appropriate term Paleozen Plateau was introduced in 1976. The Paleozen Plateau was glaciated multiple times during the Pre-Illinoian (2.6 million to 500,000 years ago), but glacial deposits are generally limited to upland positions and are obscured by a loess mantle. The boundary between the Iowan Surface and the Paleozen Plateau is marked by the transition from a gently rolling, lower relief landscape to a rugged, dissected, rock-controlled landscape; providing riders with the most climb of any day on RAGBRAI.

Iowa Rocks!!

This year’s RAGBRAI route skirts just north of Iowa’s oldest state park, Backbone State Park. The park is named after a prominent ridge of Silurian dolomite bedrock. A must-see at the park, the “Devil’s Backbone” rises high above the Maquoketa River and Backbone Lake. The rocks observed in the park show sedimentary deposits from a shallow sea that covered much of the continental interior more than 400 million years ago.

People on stairway at Backbone State Park, late 1890s or early 1900s.