Field Guide 02 |

Shaped by Rivers

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Reciprocity

The lives of rivers and people are inextricably intertwined. Humans have long settled along rivers. Their waters are necessary for our survival.

Rivers shape the landscape and the lives of people. They carry and deposit nutrients, creating fertile soils and enabling life to flourish.

We plant crops, raise livestock, fish, transport goods, and relish the beauty.

Over time they carve the earth.

In turn, humans shape rivers and land as well. We build, plough, dig, mine, plant, and harvest.

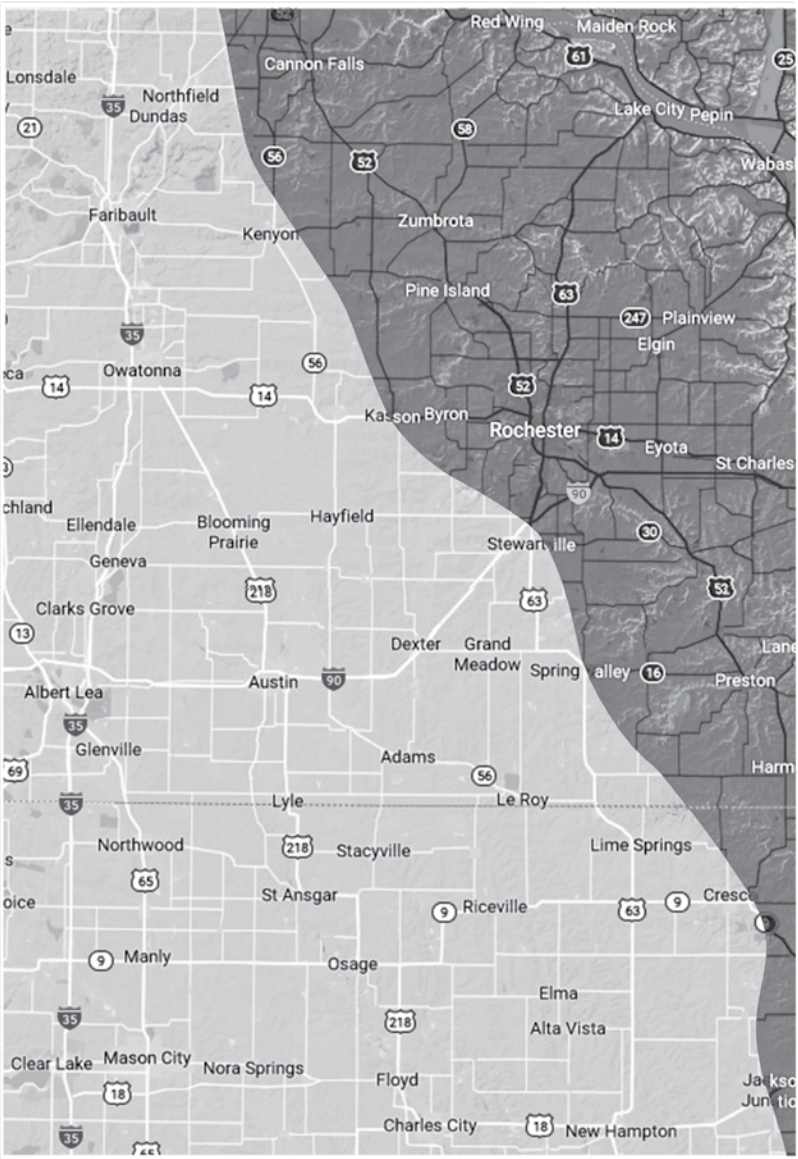
We are partners, and rivers respond to our actions.

In this partnership—as any partnership—respect begets stability. Selfishness erodes: floods and washed out bridges; lives destroyed and broken homes. Let us acknowledge our partnership. Let us appreciate and respect our partner, the wise and powerful river.

The power of rivers is on display in the Driftless Area of the upper Midwestern United States. Here, the river's work has gone uninterrupted for a million years.

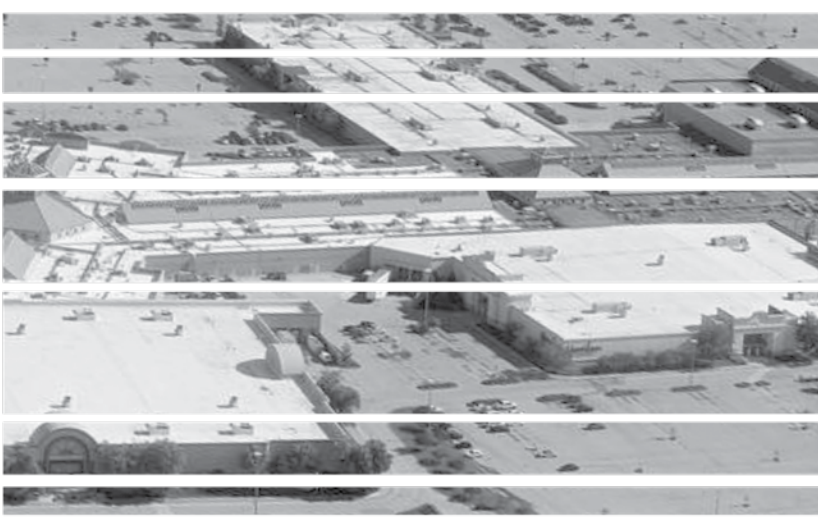
Elsewhere in the Midwest, great ice sheets repeatedly flattened the landscape, leaving a blanket of sediment—referred to glacial drift—in their wake. But the Driftless Area is unique. Having escaped glaciation, it stands as an island of deep valleys carved by rivers into the soft bedrock. The rivers continue their work in those valleys today, bounded on both sides by the hills they proudly created.

The deep imprint of time on this landscape resists the gridded road networks that characterize most flat Midwestern landscapes today. Interstates, strip malls, and tract housing—the hallmarks of post-war America—cannot be sustained here. The steep-sided valleys are unwelcoming to the economies of scale that surround the Driftless Area. And all this because the rivers were left alone to do their work.

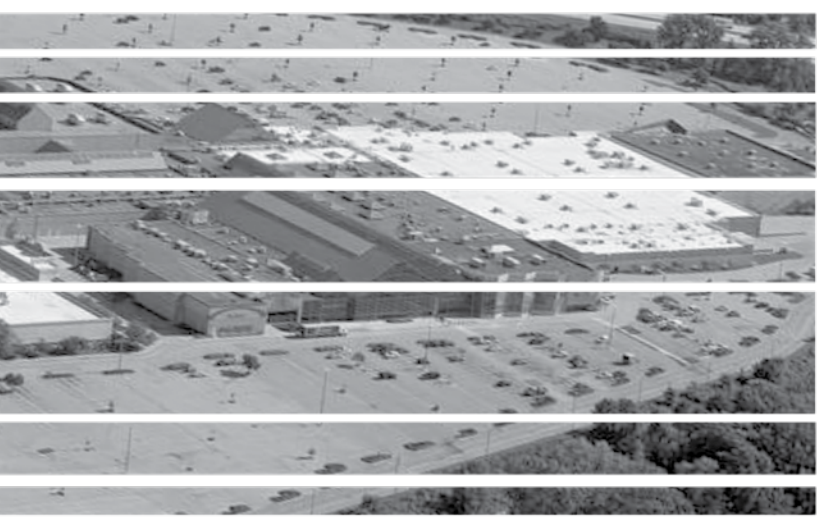


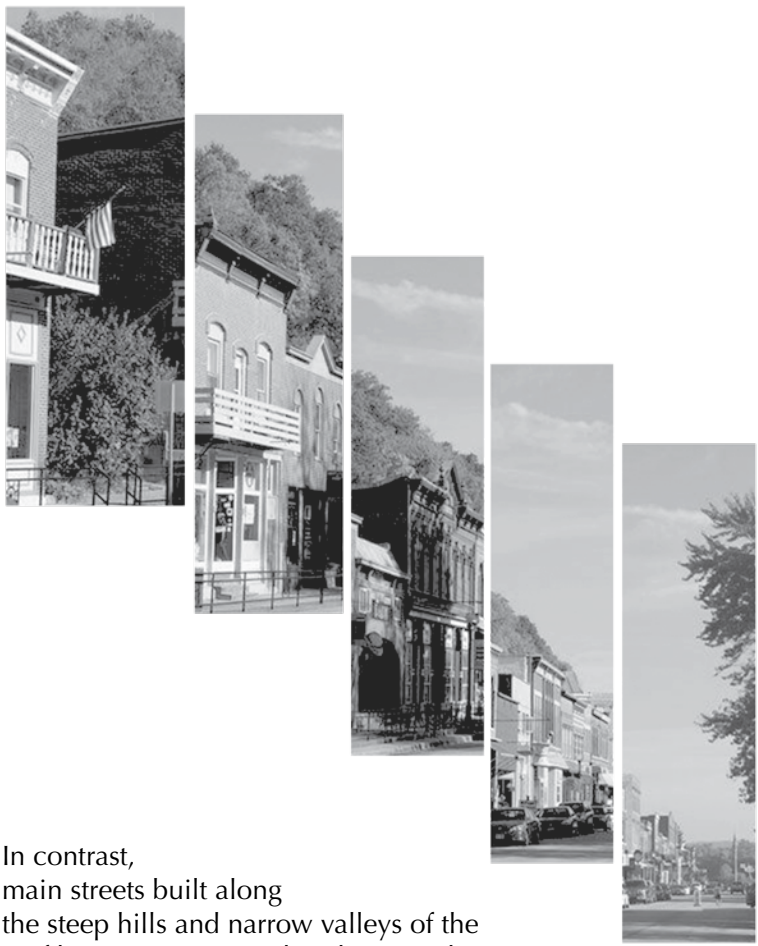
The transition of the topography is written in roadways.

River valleys dictate pathways of travel in the Driftless Area.



Architecture imitates landscape in wake of glacial drift.
Flattened lands are accommodating to corporate sprawl
and big box strip mall proliferation.
This, of course, shapes the behavior and
culture of the human inhabitants.





In contrast,
main streets built along
the steep hills and narrow valleys of the
Driftless area preserve their historic character.
The anachronistic geography holds corporate
development at bay. The smaller-scale lifestyle shaped
by the landscape in its turn nurtures a rich counter
culture.

Cycles of Crisis & Repair

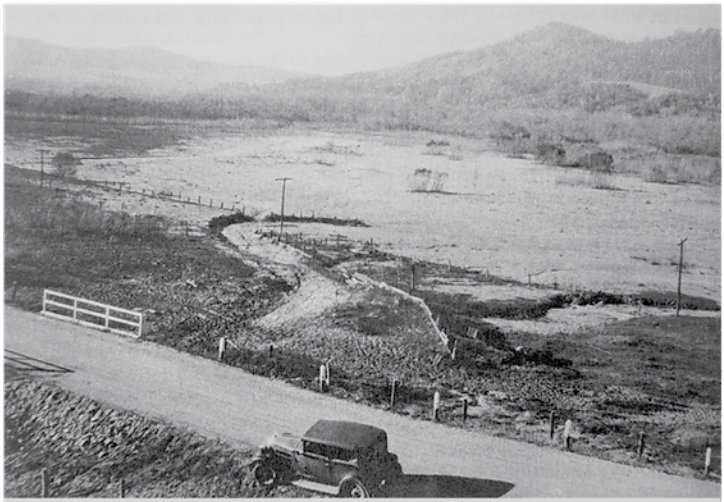
Buried in its history, the Driftless Area provides a striking example of how the partnership between people and rivers can be shattered—and mended.

As European settlers began to farm the area in the middle of the 19th century, they plowed its steep slopes like they had all other Midwestern landscapes. Prairies and forests were rapidly converted to cropland and pasture, removing the root structures that absorbed rainfall and held the hillside soils in place.

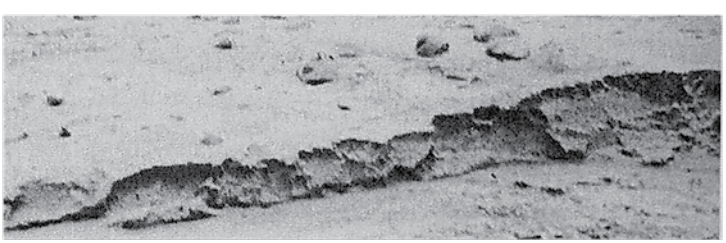
The results were devastating.

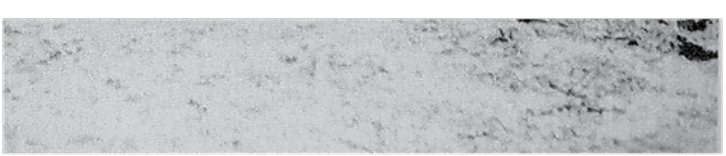
1939 near Melrose, Wisconsin

Historic Photos courtesy USDA Natural Resources Conservation Service



Small gullies widened into great chasms, sending their soils downstream to bury roads and buildings; the rivers rose to unprecedented heights, their waters choked with sediments.



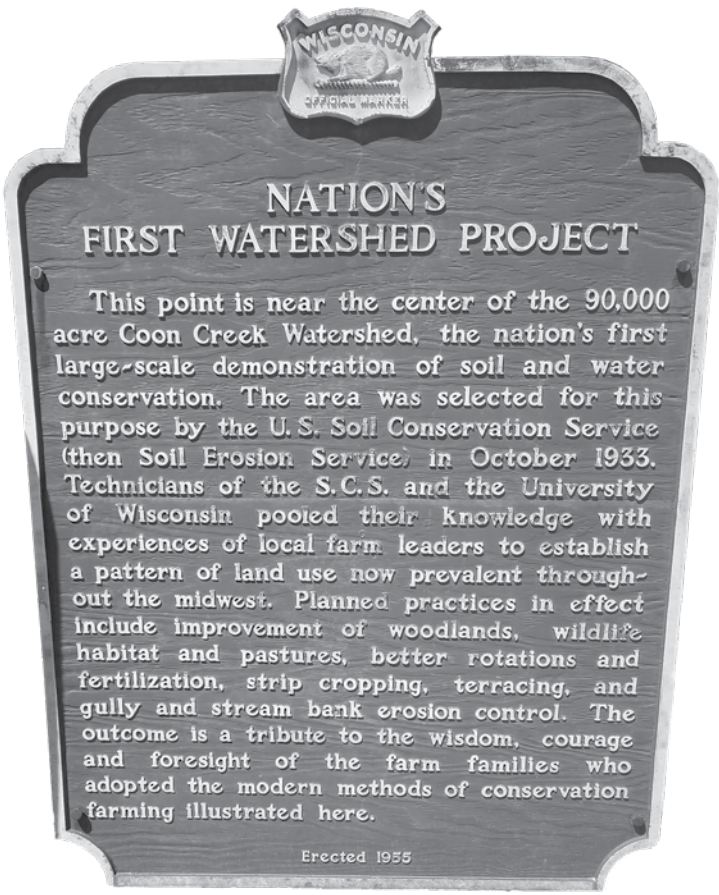


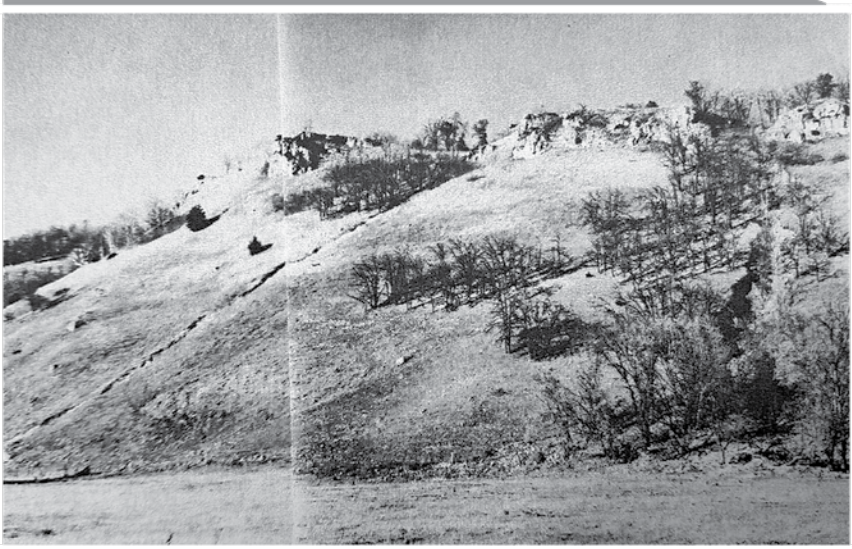
The solution to this crisis came through partnerships—partnerships between farmers and scientists, residents and bureaucrats, people and the land.

In the 1930's and 40's a series of reforms were developed put into practice to slow the erosion. Steep slopes were reverted back to forest, while fields along the floodplain edge were oriented along contours that alternated between forage and row crops.

These new agricultural practices, collectively known as contour strip cropping, gradually spread across the entire Driftless Area.

Hillsides stabilized and seasonal floods mostly stayed inside the river channel.
Water quality improved and fish thrived. Trout fishing and paddling returned. The rivers regained their due respect.


WISCONSIN
OFFICIAL MARKER
NATION'S
FIRST WATERSHED PROJECT
This point is near the center of the 90,000 acre Coon Creek Watershed, the nation's first large-scale demonstration of soil and water conservation. The area was selected for this purpose by the U. S. Soil Conservation Service (then Soil Erosion Service) in October 1933. Technicians of the S.C.S. and the University of Wisconsin pooled their knowledge with experiences of local farm leaders to establish a pattern of land use now prevalent throughout the midwest. Planned practices in effect include improvement of woodlands, wildlife habitat and pastures, better rotations and fertilization, strip cropping, terracing, and gully and stream bank erosion control. The outcome is a tribute to the wisdom, courage and foresight of the farm families who adopted the modern methods of conservation farming illustrated here.
Erected 1955



1940

2009

Contour strip cropping

Today

The spirit of land stewardship continues in the Driftless Area today.

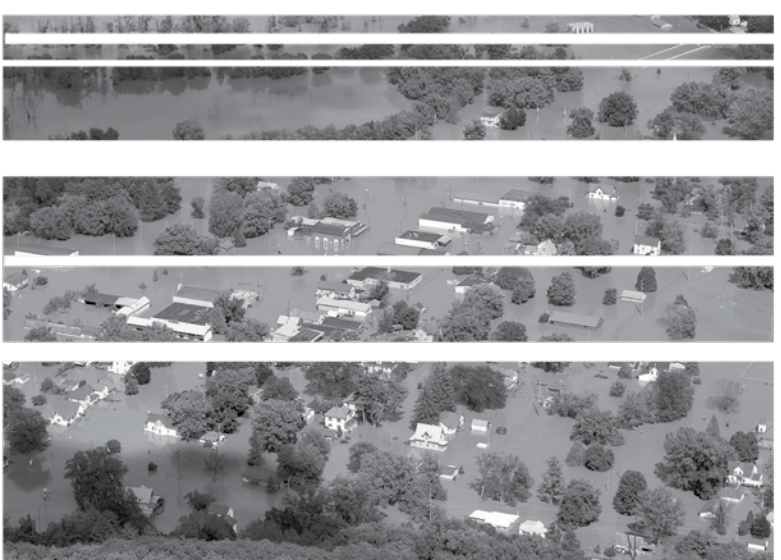
Mutual respect between rivers and people begets prosperity and admiration.

Recently, though, this relationship has undergone a new test.

Gays Mills, Wisconsin 2018

The underlying causes of these floods remain murky. The atmosphere that hovers over the Driftless Area—and the rest of the planet—has grown thicker with carbon dioxide and other gasses that warm the air, and bring heavier downpours.

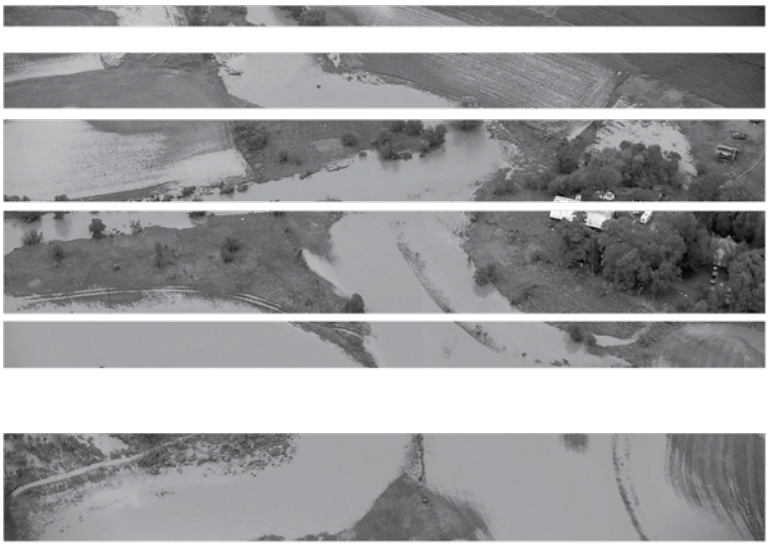
Settlements in the Driftless are situated on wide sections of floodplain, often at the confluence of two rivers. Recent repeated flooding triggered by severe summer rain storms have inundated communities, destroyed croplands, initiated landslides.



Flood photos by Erik Daily

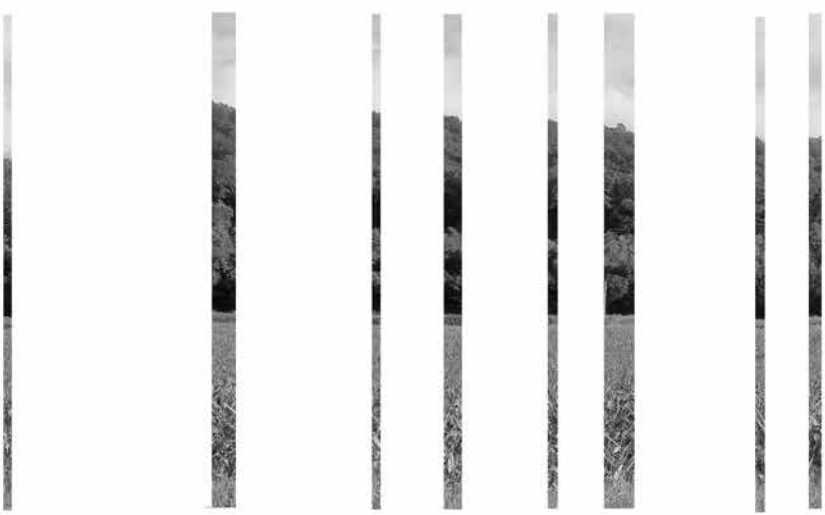
But other changes are afoot, too—the rivers are forever scarred by the abuses of nearly a century ago, their channels narrower and banks higher. And, with economic incentives dictated from beyond, dairy farming and its pasture has given way to more row crops.

La Farge, Wisconsin 2018



Gradually, this unique are—the Driftless—which has stood isolated for so long, has found its connection to the outside grow stronger. And with the loss of its isolation, crisis beckons once again.

Partnerships between people and the land solved the last crisis, just as they can this one. Ingenuity in stewardship will come from mutual appreciation, by listening to the rivers and to one another.



The Field Guides are a series of publications released in conjunction with Mississippi: An Anthropocene River, a research-creation platform exploring the Anthropocene's changing spatio-temporal formations in the vast but patchy region around the Mississippi: a constantly shifting ecosystem, a catchment of cultures, a dividing line, a water highway for resources and goods, a sink for pollutants, and both symptom and product of the radical transformation of the Earth.

Spared the homogenizing effects of glaciers, the Driftless area of the upper Mississippi region reflects the uninterrupted work of rivers over millions of years. Characterized by deeply incised river valleys, the land resisted agricultural practices and gridded transportation systems imposed on surrounding flatlands. *Shaped by Rivers* explores how this anachronistic geography demanded a unique relationship from its human inhabitants, and how recent flooding continues to beg questions around global impacts on this reciprocal web of relations: human, land, and river.

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