

Prairie Moraine Park / Ice Age National Scenic Trail

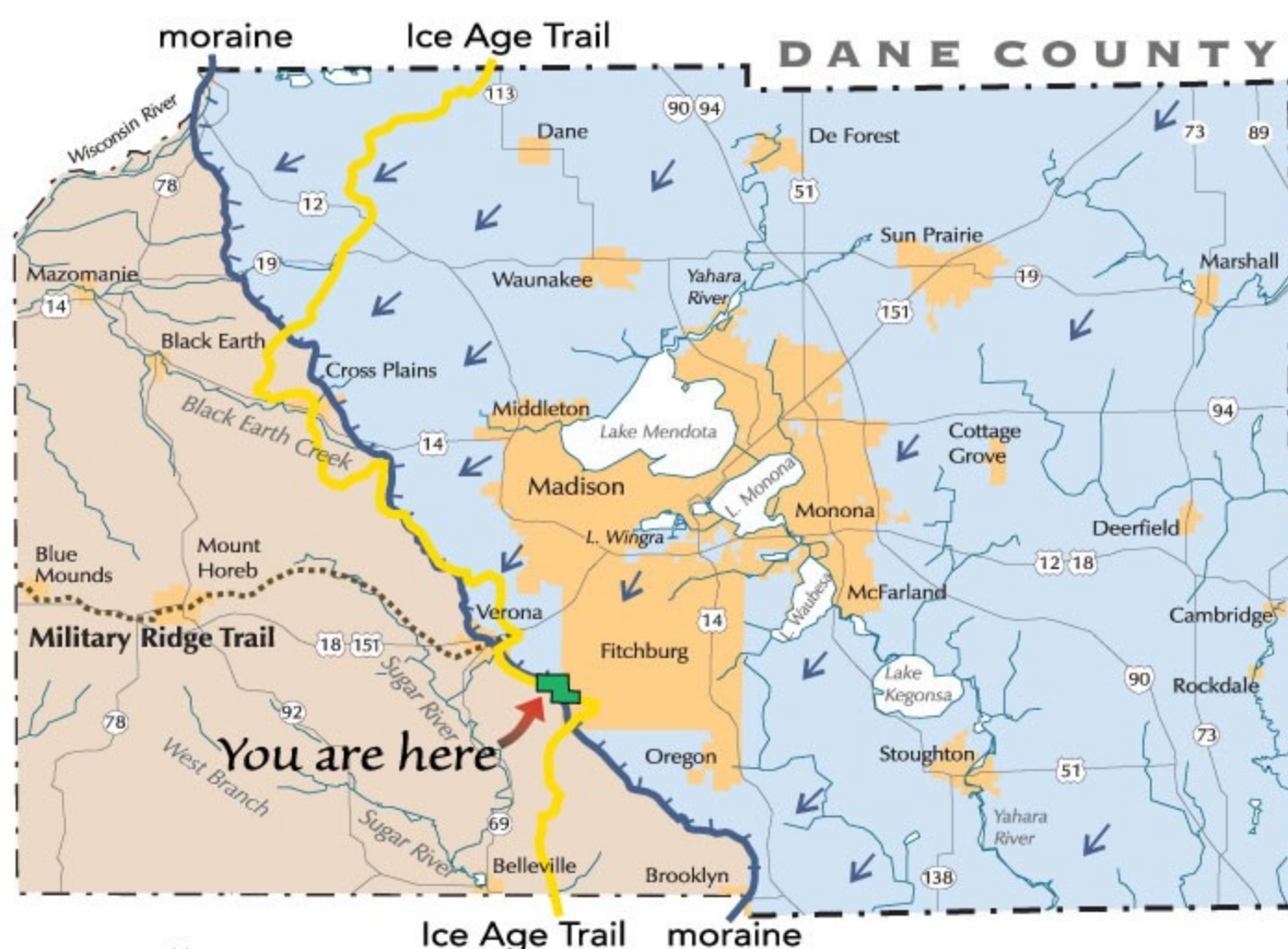
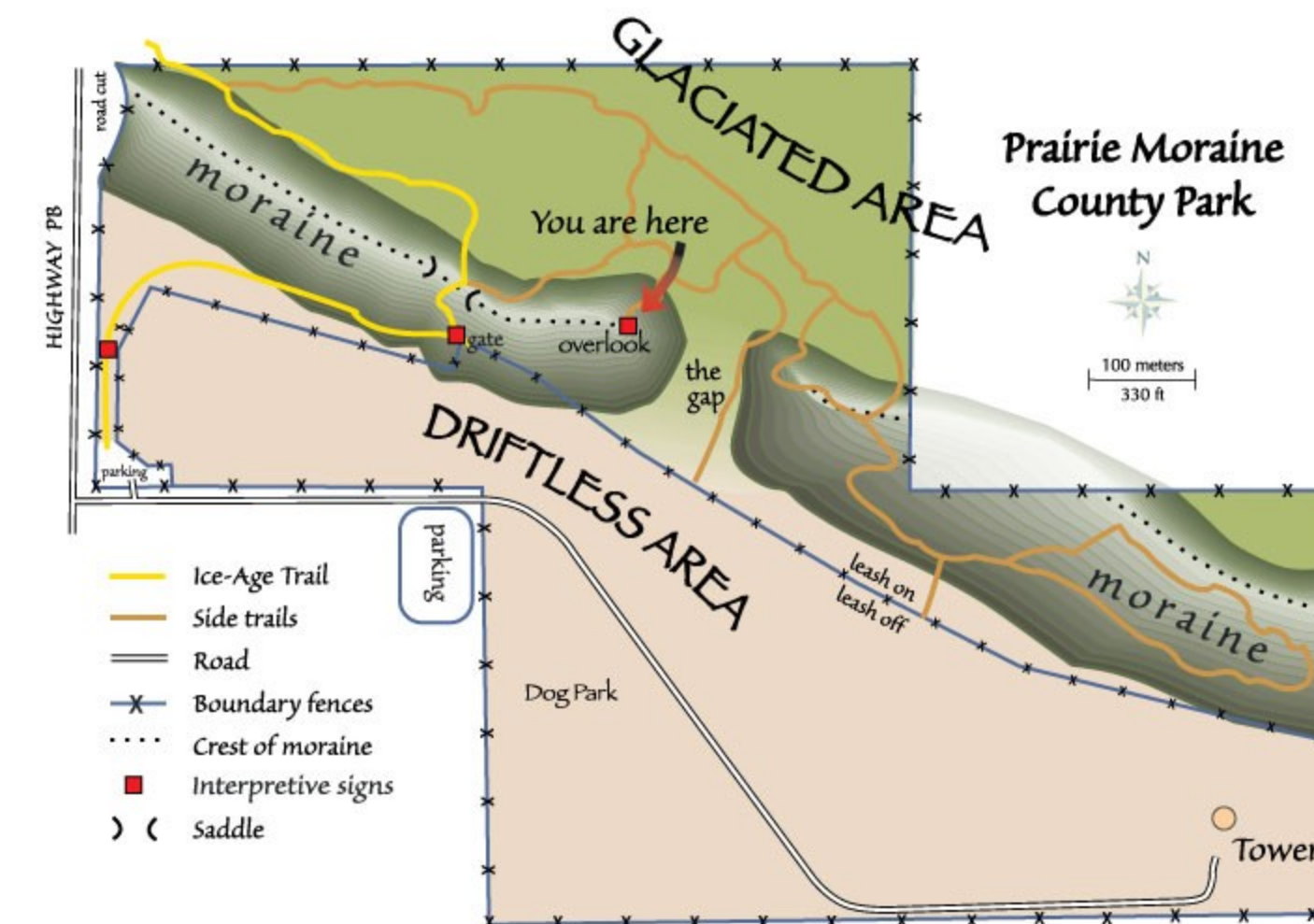


Wisconsin Glaciation and the Terminal Moraine

About 100,000 years ago, the most recent phase of the "Ice Age" began. Glacial ice built up in Northern Canada and, under the pressure of ever-accumulating snow, flowed southward like thick pancake batter slowly spreading across a warm pan. The ice entered Wisconsin about 30,000 years ago and advanced in six main "lobes" (shown below). It is estimated to have been a mile thick over Green Bay, and about three times the height of the Wisconsin State Capitol building over central Dane County.

Around 22,000 years ago, it was at its farthest advance and the edge of the ice sheet stood HERE for some years creating the terminal moraine where you are standing. The forward moving ice brought rocks and gravel that were deposited on the moraine as the ice melted at the same slow rate it moved forward.

About 18,000 years ago, warmer temperatures increased the glacial melting and the ice melted back out of the state over several thousand years. In North America this most recent phase of the Ice Age is named the **Wisconsinan Glaciation** primarily because of scientific studies done by two University of Wisconsin geologists, Charles Van Hise and Thomas Chrowder Chamberlin.



Behind the Moraine

The area to the north (left), behind the moraine, is underlain by the same glacial debris as in the moraine. Two things may account for its rather hummocky topography: The glacial debris is considerably thinner than in the moraine, perhaps 10 to 20 feet. Any preglacial topography greater than that probably was not completely obliterated. In addition, the glacier probably laid down a blanket of debris of irregular thickness. That could mean the low hills are places where the glacier carried more debris. Or, it could mean the reverse: Thicker debris on melting ice would provide greater insulation for any underlying ice, which would produce a depression when it finally melted. Several of these depressions in the woods to the north and east are deep enough to hold permanent ponds.

The Moraine

The ridge you are standing on is a moraine, here about 60 feet high. The photo above was taken from several hundred yards west. It shows the crest of the moraine and the land immediately behind it. A moraine is a ridge that forms at the edge of a glacier when the edge is stationary. It is stationary when the forward movement of the flowing ice is balanced by the backward melting of its edge. Every inch of ice movement is matched by every inch of ice melted off the front. Moraines form where rock debris melts out of the ice.

This moraine marks the edge of the Green Bay Lobe of the great North American ice sheet where it paused as it reached its greatest extent during the Wisconsin Glaciation roughly 18,000 years ago. It has been traced as an almost continuous ridge through Dane County and beyond.

The Driftless Area

To the south is the Driftless Area. There is no solid evidence that this area was ever glaciated. Near the moraine the terrain is covered by glacial debris -- dirt and large "erratic" boulders that tumbled off the melting ice. Beyond, the Sugar River Valley is filled with sand gravel "outwash" from glacial meltwater streams. Further out, are many valleys and steep ridges of limestone and sandstone created by erosion over hundreds of millions of years -- Wisconsin's Driftless Area.

Interpretive signage provided by:

- Ice Age Trail Alliance
- Wisconsin Geological and Natural History Survey
DIVISION OF EXTENSION - UNIVERSITY OF WISCONSIN-MADISON
- With funding from:
Dane County Parks
- Prairie Moraine Friends



Dane County Parks
(608) 224-3730 • www.danecountyparks.com
TTY: Call WI Relay 711

Prairie Moraine County Park
6724 Wesner Road
Verona, WI 53593