

## Major Landscape Features

### 1. Gogebic and Trap Ranges

Two large ridges are all that remain of an early mountain range in northern Wisconsin. The south ridge, the Gogebic (pronounced go-gee-bik) Range, formed about 1.9 billion years ago. About 800 million years later, lava flows from deep in the earth created the north ridge, the Trap Range.

### 2. Blue Hills

Peaks of very hard, very old rock rise up to 600 feet above the nearby land surface in northwest Wisconsin. These are the Blue Hills. They are the same age (1.7 billion years old) and the same very hard rock type as the Baraboo Hills (#6).

### 3. Margin of the Northern Ice Lobes

The long, narrow ridge at the border of a bumpy land surface marks the edge of the last great ice sheet. This ridge, called a glacial moraine, was formed approximately 20,000 years ago.

### 4. Northern Highlands

At 2.8 billion years old, the mound in the center of northern Wisconsin is made up of the oldest rocks on the continent. Debris from glacial ice form the bumpy surface on top of this rock dome.

### 5. Central Sand Plains

The large flat triangle in the center of the state was once the sandy bottom of a huge lake, Glacial Lake Wisconsin. When the lake drained, a massive flood carved the landscape. The floodwaters created the Wisconsin Dells and shaped the lower Wisconsin River (#7).

### 6. Baraboo Hills

The broken ring of hills in south-central Wisconsin is all that remains of the ancient Baraboo Mountains that formed 1.7 billion years ago. The Baraboo Hills are made of an extremely hard, distinctively red rock known as Baraboo quartzite.

### 7. Lower Wisconsin River Valley

This valley has been worn away by water for millions of years. However, about 20,000 years ago, floodwaters from Glacial Lake Wisconsin (see #5) cut the valley walls to the cliffs we see today and filled the valley with over 200 feet of sand and gravel.

### 8. Blue Mounds

Two hills just west of Madison form the Blue Mounds. These hills are topped by a hard rock that was eroded away in most of the surrounding Driftless Area (#14). It is the same sturdy rock that forms the Niagara Escarpment (#13).

### 9. Drumlins of the Southern Green Bay Lobe

This mass of submarine-shaped hills is a drumlin field. The drumlins were formed under a glacier that was nearly a mile thick, about 20,000 years ago.

### 10. Kettle Moraine

A long series of ridges, valleys, and a generally bumpy surface runs up the eastern part of the state. This is the Kettle Moraine. The collision of the Green Bay and Lake Michigan Lobes during the last glacial advance left behind this moraine.

### 11. Green Bay and Fox River Lowland

When ice filled this bay about 20,000 years ago, it blocked the water that drained from melting ice. The blockage formed Glacial Lake Oshkosh. All that remains of that great lake is the broad flat area to the west and south of Lake Winnebago.

### 12. Marginal Ridge of the Green Bay Lobe

This ridge, called the Johnstown Moraine, is most visible near the Central Sand Plains (#5). It marks the farthest extent that ice advanced in the Green Bay Lobe about 20,000 years ago.

### 13. Niagara Escarpment

The cliff rising above the east shore of Lake Winnebago is part of the Niagara Escarpment. This ridge of hard rock continues in an arc all the way to Niagara Falls. The same hard rock forms those famous falls, for which this ridge is named.

### 14. Driftless Area

This region of the state has v-shaped valleys that look from above like the branches of trees. The valleys of the Driftless Area were cut by streams over millions of years. In contrast, the rest of the state was shaped by ice during the last 20,000 years.

To learn more about these landscape features, visit [WisconsinGeologicalSurvey.org](http://WisconsinGeologicalSurvey.org).

### SOURCES

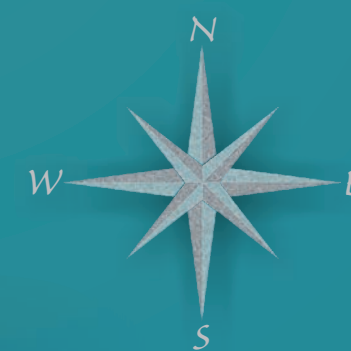
*Roadside Geology of Wisconsin*, Robert H. Dott, Jr., and John W. Attig, 2004. Missoula, Montana: Mountain Press Publishing, 346 pages.

*Landscapes of Wisconsin*, Thomas Hooyer and others, 2001. Wisconsin Geological and Natural History Survey State Map 40, scale 1:500,000.

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# 3-D WISCONSIN

What we see at the surface is a key to the geologic past



This map requires red/blue 3-D glasses.

Map not to scale.

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