

OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

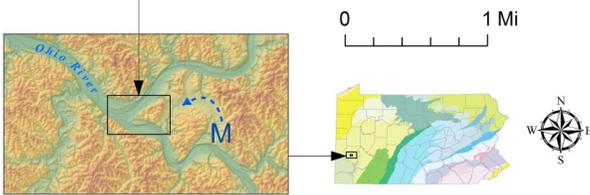
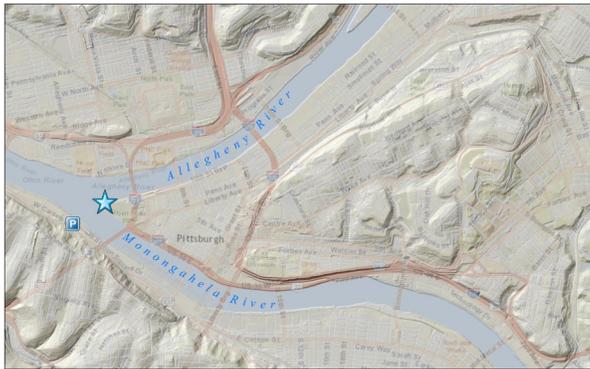
THE POINT, ALLEGHENY COUNTY

Stuart O. Reese, 2016



Location

The Point, Pittsburgh, Allegheny Co., lat: 40.44188, lon: -80.01318; Duquesne Incline, lat: 40.44033, lon: -80.01715 (parking); Pittsburgh West 7.5-minute quadrangle



Recommended Reading

Harper, J. A., 1997, Of ice and waters flowing—the formation of Pittsburgh’s three rivers:

[Pennsylvania Geology](#), v. 28, no. 3/4, p. 2–8.

_____, 2002, Lake Monongahela—atomy of an immense Ice Age pond: [Pennsylvania Geology](#), v. 32, no. 1, p. 2–12.

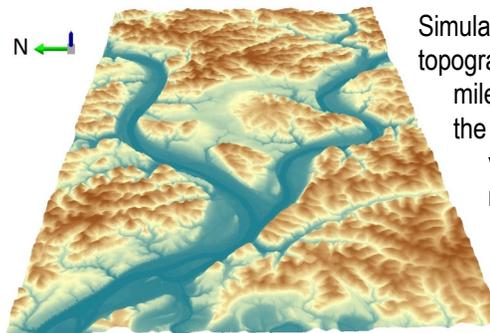
[Point State Park](#) web page of DCNR.

Below: View to the north from the Duquesne Incline showing the Allegheny River (middle) and Monongahela River (right) flowing into the Ohio River (left). Photograph by Nathan Reese, Pennsylvania Geological Survey intern.

Geology

At Pittsburgh, the Monongahela and Allegheny Rivers converge to form the Ohio River. This point is notable in American history and is a focus of commerce and culture.

Before Pleistocene glaciations, the Monongahela served as the main regional river (known as the Pittsburgh River). It flowed through today’s Beaver River valley northwest of Pittsburgh into northeastern Ohio and ultimately to Canada. The ancestral Ohio River flowed northeast into the Pittsburgh River as a relatively small tributary. A series of glaciations during the last 2 million years transformed this landscape. South-flowing glaciers approached as close as 33 miles away, disrupting stream patterns and forming a vast Lake Monongahela (probably several times). High-volume outflow from the lake deepened channels, overran drainage divides, and diverted water to the southwest. In this way, the current Ohio River drainage expanded northeastward. When the glaciers retreated, meltwater and sediment poured downriver, following a westward course of reversed regional drainage. As the modern drainage was established, several terrace levels emerged while the rivers eroded into the much older bedrock of Pennsylvanian shale, sandstone, limestone, claystone, and notable coal seams.



Simulated oblique view of Pittsburgh topography looking east about 16 miles. A large, relict meander of the Monongahela River is distinctly visible between the rivers (also noted by “M” and dashed arrow on location map).

