When ice melts

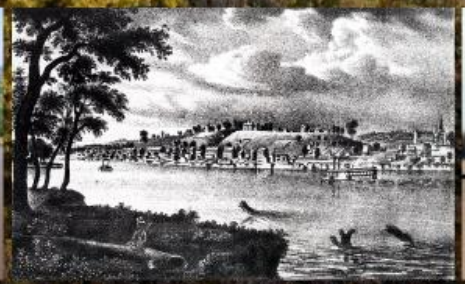
After glaciers flattened the Midwest, the Missouri River started draining south and east instead of north. As the last glacier's ice sheet melted, great volumes of water cut a deep, wide Missouri River valley. That's why the valley is so much bigger than the river's flow. In winter, when melting stopped temporarily, winds blew dried silt from the riverbottom. That created rich loess soil near the river valley.

The old Missouri River moved back and forth across its wide floodplain from decade to decade. This "Big Muddy" carried heavy loads of sediment and flooded regularly.

Since major floods in 1993 and 1995, public agencies have bought Missouri River bottom acreage from willing sellers for recreation and river restoration. These public lands benefit fish and wildlife, and establish natural wetlands for flood reduction.

POWER OF THE RIVER

The 2,300-mile-long Missouri River drains a huge piece of our continent, gaining rain and snowmelt from 10 states and two Canadian provinces. By the time the Missouri reaches St. Charles, it often runs high. Levees funnel the river down a narrow channel and increase the chance of flooding.



Left to right: Islands in the Missouri River are less common now. Opposite St. Charles in mid-1800s. Vast sandbars appear when the river is low.

Image credits: Missouri Department of Conservation (1,background), State Historical Society of Missouri, Columbia (2), Rose Marie Muzika (3).