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Mapping the Missouri

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By: Becca Krasky

Today's Missouri River looks incredibly different from the Missouri River explored by Lewis and Clark from 1804 to 1806 on their historic "Voyage of Discovery". They traversed a wild river, called the "Big Muddy", so named because of its massive sediment load, winding through a floodplain up to twenty miles wide (Schneiders, 1999). The banks and floodplain were forested with a successional variety of trees, including towering cottonwoods. Bison and elk roamed the prairie, and the river was inundated with native fish.

Today, much of the cottonwood forest is gone because of conversion to agriculture. The river is controlled by six mainstem dams north of Sioux City, Iowa, and channelized from Sioux City to its confluence with the Mississippi in Missouri. It flows in a straight, deep channel, with much of its sediment trapped by the dams. Native fish are maladapted to the fast flowing and dammed river, and struggle to compete with invasive species, such as silver carp. Two endangered shorebirds, the Piping Plover and Least Tern, and one native fish, the Pallid Sturgeon, are several species affected by the damming of the river, and are protected under the Endangered Species Act (Lawson, 2009).

So, why has the river changed so much? The present-day Missouri River reflects South Dakota's past of colonialism, and the state's entrenched reliance on the global economy for trade of the state's natural and human resources (Dhillon, 2017). This can be seen in the loss of almost all the state's native prairie, its shrinking wetlands, and the dammed Missouri River. South Dakota's prairie was willingly sacrificed to grow commodity crops, such as corn and soybeans. The state's original Indigenous inhabitants, the Arikara/Sahnish, Dakota, Lakota, and Nakota Sioux, were robbed of much of their land and were forced to move to reservations. Through the Pick-Sloan Plan, the Missouri River was dammed in the 1950s and 1960s to protect downstream cities from flooding (Lambrecht, 2005); however, this Plan allowed the flooding of entire reservation communities, inundating their most fertile land, sacred sites along the river, and ancestral homes (Lawson, 2009). South Dakota's white government and white settlers have always had priority in dictating the uses of the state's landscapes.

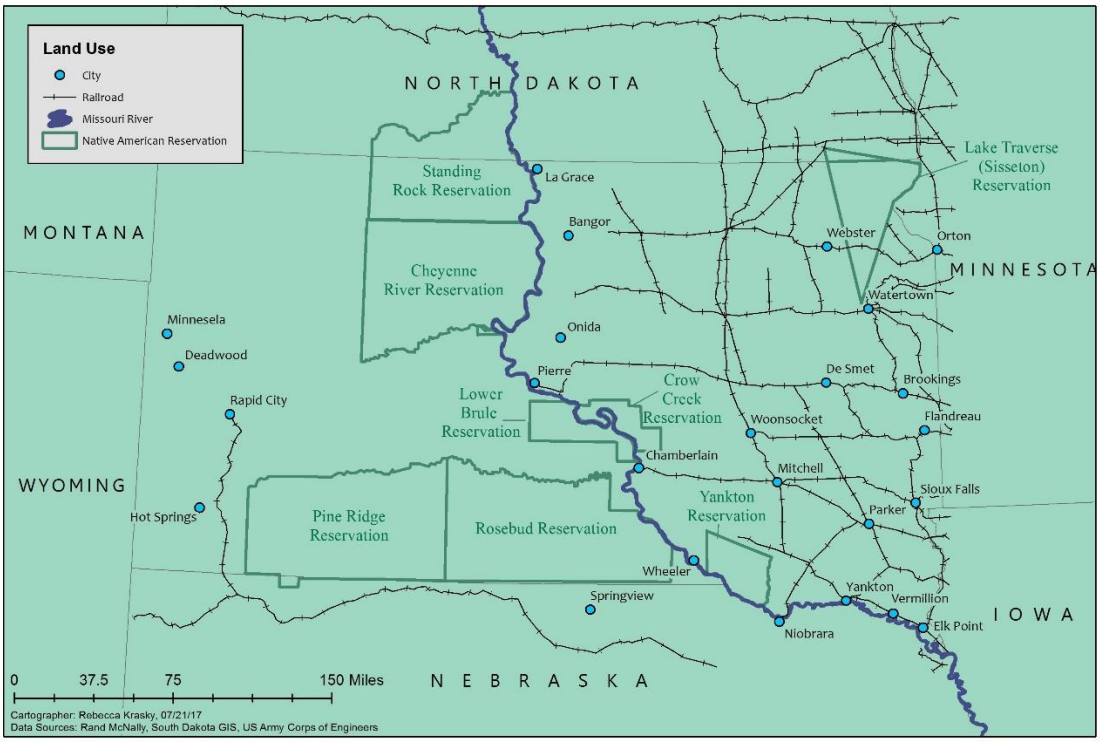
So, what's the future of the Missouri River in South Dakota? Will it always be restrained by dams, dikes, and bank stabilizers? Or will it be allowed to be wild, meandering throughout the floodplain, and maintaining natural flooding regimes? I wonder whether valuation and quantification of essential ecosystem

services, tangible benefits to people provided by the environment, could help residents of the Upper Missouri basin recognize how valuable a restored Missouri River might be. River management is a complicated issue, with numerous stakeholders, and as history has shown, decisions about land use have profound implications for the future. Our actions today will dictate how future South Dakotans interact with the Missouri, and as caretakers of this land, it is our responsibility to carefully evaluate options for river management.

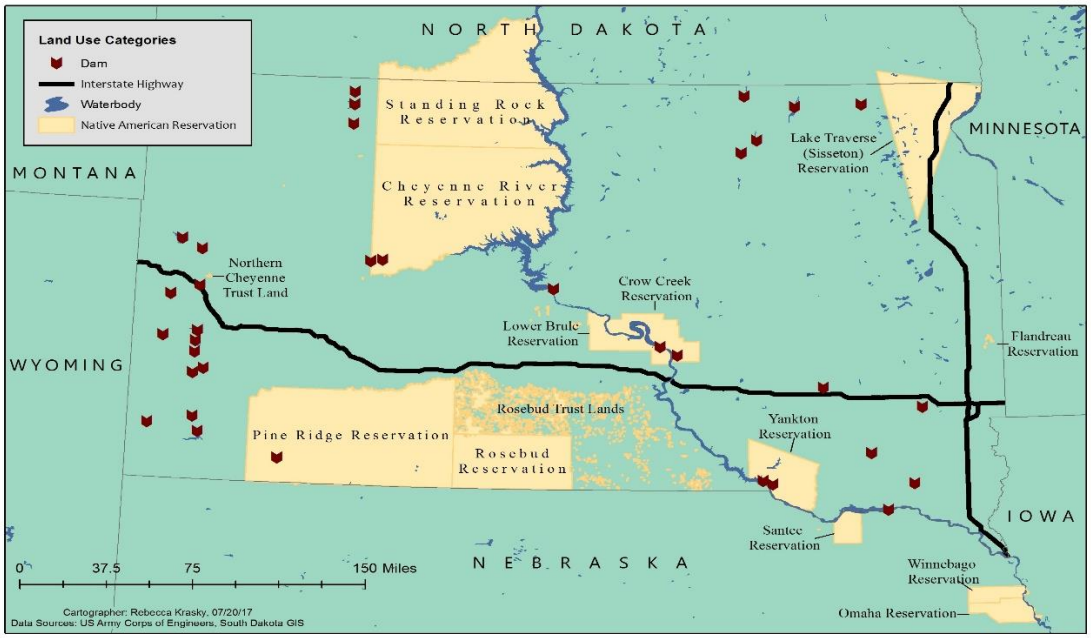
Would you like to learn more about these issues?
My top book recommendations from this summer are, in no particular order:

- Dammed Indians Revisited: The Continuing History of the Pick-Sloan Plan and the Missouri River Sioux by Michael Lawson
- Big Muddy Blues: True Tales and Twisted Politics Along Lewis and Clark's Missouri River by Bill Lambrecht
- Strangers in Their Own Land: Anger and Mourning on the American Right by Arlie Russell Hochschild
- Prairie Rising: Indigenous Youth, Decolonization, and the Politics of Intervention by Jaskiran Dhillon

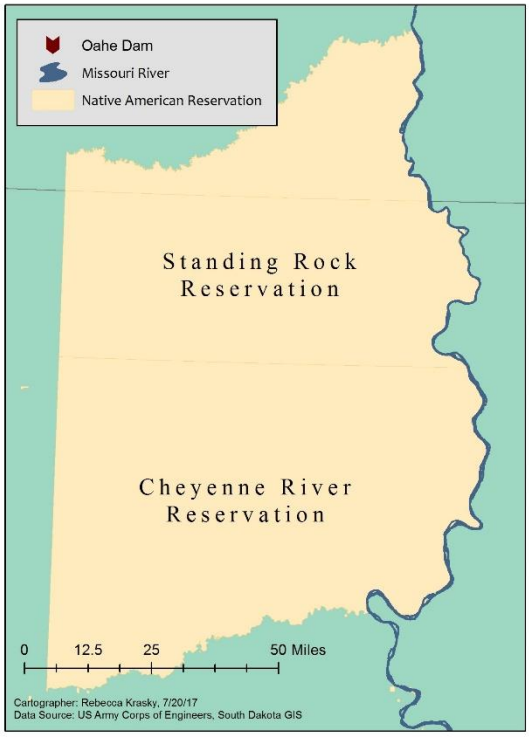
South Dakota Land Use 1893



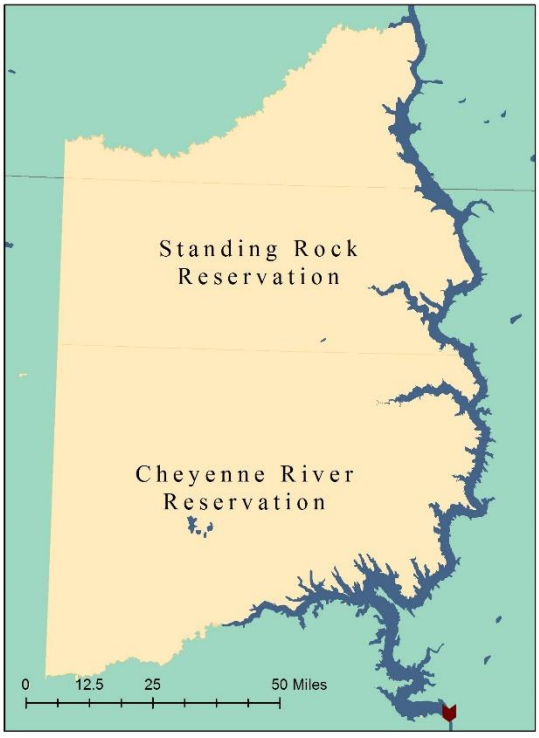
South Dakota Land Use 1966



Missouri River Pre-Dam, 1950



Missouri River Post-Dam, 1967



Becca is a junior at Macalester College in St. Paul, Minnesota and is majoring in Environmental Studies and Geography. She spent this summer researching how South Dakota's landscape has changed over the past three hundred years, and created maps to reflect these changes. Her research included reading over ten books about the state's rural geography and history.

Literature Cited

Dhillon, J. (2017). Prairie Rising: Indigenous Youth, Decolonization, and the Politics of Intervention. Toronto: University of Toronto Press.

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