



N.D. State Water Commission



The Railroad Bridge over the Missouri River in Bismarck.

The Missouri River: *A Spectacular Natural Resource*

By Kimberly Cook

The longest river in North America, the Missouri River flows through North Dakota with a seemingly unending water supply. The massive amount of water flowing between its banks accounts for 95 percent of North Dakota's surface water. However, North Dakotans use just over one percent of the flows that move through the state – North Dakota is a long way from utilizing this river to its greatest extent.

Much of North Dakota's Groundwater is Allocated

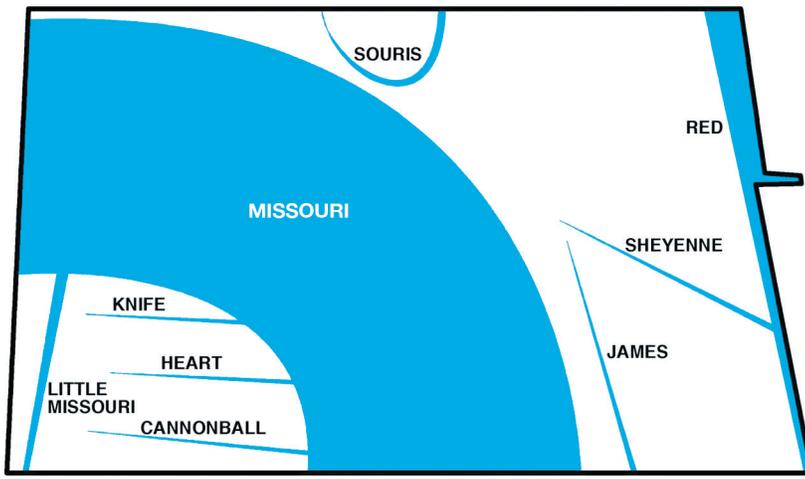
Groundwater lies under the land surface, and can be found throughout almost all of North Dakota; however, oftentimes groundwater is at a great depth or is of very poor quality, making it unsuitable to drink. Most of the state's quality groundwater is found in aquifers primarily in the eastern, central, and northern parts of the state. But, some aquifers are heavily appropriated and are unavailable for additional large-scale future use.

Surface Water as a Solution

Surface water is water contained or flowing in streams, rivers, wetlands, lakes, reservoirs, or other bodies of water on the earth's surface. The Missouri River system contains most of North Dakota's surface water and is the only plentiful source of unappropriated water in North Dakota. In order to provide high-quality water for the people of North Dakota, several water supply projects throughout the state have had to look to the Missouri River for a reliable and sustainable source of water.

The Southwest Pipeline Project (SWPP) is a regional water system, which, in North Dakota Century Code, is to "...be established and constructed, to provide for the supplementation of the water resources of a portion of the area of North Dakota south and west of the Missouri River with water supplies from the Missouri River for multiple purposes, including domestic, rural, and municipal uses." The SWPP draws water from Lake Sakakawea and currently serves about 58,000 residents,

Average Discharge of Principal Rivers in North Dakota



primary water source. However, the Red River has a history of drying up during times of drought. The Red River Valley Water Supply Project is designed to supply eastern North Dakota with treated Missouri River water through a buried pipeline. The project would provide a supplemental supply of Missouri River water during times of severe drought.

The Central Dakota Water Supply Project is a recently proposed project designed to bring Missouri River water to central North Dakota for municipal and industrial use. Without this potential project, central North Dakota's industrial growth is limited, which also limits the region's economic growth.

including more than 5,350 rural service locations, 31 communities, and 23 raw water customers. The SWPP has been under construction since 1986, resulting in an efficient network of pipelines, pump stations, reservoirs, and treatment facilities to bring southwest North Dakota an adequate supply of quality water.

Another regional water supply system drawing Missouri River is the Northwest Area Water Supply System (NAWS). The NAWS project will supply and distribute water to the people of northwestern North Dakota through a pipeline transmission and delivery system upon its completion. When completed, NAWS could serve as many as 81,000 people in northwest North Dakota.

The Western Area Water Supply Project (WAWS) also utilizes Missouri River water to meet the needs of municipal, rural, and industrial users in five northwestern North Dakota counties – Burke, Divide, McKenzie, Mountrail, and Williams. WAWS has been developing a regional water system to deliver Missouri River water from the Williston Regional Water Treatment Plant to areas throughout the northwest, the oil-producing areas of the state.

More than 40 percent of North Dakota's total population lies in the Red River Valley in eastern North Dakota, and relies on the Red River as its

Downstream Users

As the severe drought continues throughout the Midwest and southern United States, other states are eyeing the Missouri River for much-needed water, as well. For example, the Southwest Kansas Groundwater Management District realized there was an excess of unused Missouri River water that could be a solution to

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(Right) Missouri River near Bismarck.

the need for sustainable water supply in southwestern Kansas. There are now plans in place to refresh the Ogallala Aquifer, a massive underground water system stretching from Nebraska to Texas, with Missouri River water. The Kansas Aqueduct Project would divert water at high flow or flood times on the Missouri River in order to replenish the Ogallala Aquifer and irrigate crops in western Kansas.

In addition, there are multiple other projects outside of North Dakota looking at the Missouri River as a reliable and sustainable water source. Colorado is experiencing a water shortage and has expressed interest in using the Missouri River to supplement its water supply.

Western Water Law

At the first North Dakota Constitutional Convention in 1889, Major John Wesley Powell spoke about the importance of water management and advised convention delegates to retain ownership of the state's water resources for the benefit of the people of North Dakota. As a result, a constitutional provision was adopted by the members of the Constitutional Convention which says, "All flowing



streams and natural water courses shall forever remain the property of the state for mining, irrigation, and manufacturing purposes."

Then, in the early 1900s, North Dakota adopted the principals of Western Water Law, which basically say that the first person, municipality, or other entity that applies for a water use permit and puts that water along a waterway to beneficial use, has priority over less senior water users in times when water is not as plentiful. To summarize, North Dakota owns the rights to the natural flows of the Missouri River into and through Lake Sakakawea and Lake Oahe.

North Dakota has several successful water supply projects providing for the water supply needs of the people of the state. However, North Dakota could further exercise its rights to the abundant water source in the Missouri River, before other states lay claim to the water that flows through the state. If Missouri River water flows through untapped, in the future, North Dakota's access to Missouri River water could be severely limited. North Dakota needs to perfect its water rights to the Missouri River now, before it's too late. As the old adage says, "you don't know what you've got 'til it's gone."

By properly managing one of the greatest natural resources within the state, the water of the Missouri River can positively impact North Dakotans for years to come.

