The Oxbow

FROM THE DEPARTMENT OF WATER RESOURCES

THE MISSOURI RIVER

AN EXTRAORDINARY & VALUED RESOURCE

The Missouri River has been an important resource for people living along or near it for thousands of years. Over time, the corridor of the Missouri River was developed and populations increased, and efforts have been made to control flows, create storage, and prevent flooding. As a result, six mainstem dams have been in place for more than half a century, with the goal of bringing economic, environmental, and social benefits to the people of North Dakota and six other states: Montana, South Dakota, Nebraska, Kansas, Iowa, and Missouri.

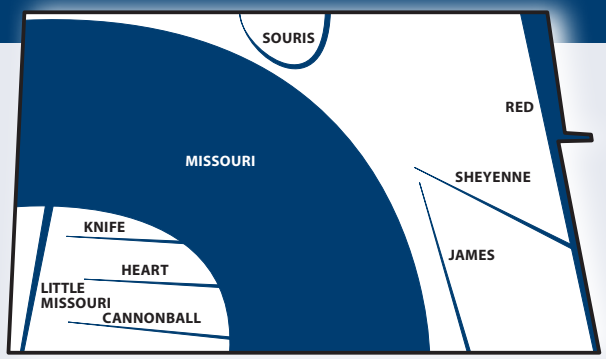
The U.S. Army Corps of Engineers (USACE) operates the Missouri River dams under the guidance of the Missouri River Mainstem System Master Water Control Manual. The manual was originally developed in 1960, however it has been modified as needed with the latest revision in 2018. The Master Manual incorporates management strategies for the multitude of uses the river system supports.

The Missouri River was once free flowing with meandering braided channels, sand bars, and expansive tree-covered riparian areas. The river was free to make its own banks, which were ever changing, and seasonal flooding was a common occurrence. Today, six dams and reservoir projects make up the Missouri River reservoir system

Garrison Dam was built decades ago, in part, to help control flooding on the Missouri River, the longest river in the country. In 2011, the emergency spillway gates at the dam were used for the first time to release floodwater.

including Garrison, Oahe, Big Bend, Fort Randall, Fort Peck, and Gavins Point. These dams were constructed by the federal government and are maintained and operated by the USACE for the following authorized purposes: flood control, water supply, recreation, irrigation, hydropower, water quality, fish and wildlife, and navigation.

The Missouri River flows for 2,342 miles from the Rocky Mountains in Montana and eventually joins the Mississippi River in St. Louis, Missouri. The river is a tremendous resource for many of North Dakota's municipal, rural,



Relative annual discharge of North Dakota's largest rivers.

industrial, and agricultural water users. There are currently several water supply intakes along the Missouri River system used for various purposes in the state, including four large regional water supply systems - the Southwest Pipeline Project, Western Area Water Supply, Northwest Area Water Supply, and the Red River Valley Water Supply Project.

The Southwest Pipeline Project (SWPP) was established in 1986 to provide a reliable and high-quality water supply from the Missouri River to a portion of North Dakota, south and west of the Missouri River. The SWPP currently serves 56,000 water users, including 7,400 rural customers, 33 communities, and 25 raw water customers. With the population continuing to grow in this region of North Dakota, it is expected that the SWPP will continue to expand. Through December 2021, the state has provided a total of $287.7 million towards the development of this infrastructure.

Established in 2011, the Western Area Water Supply (WAWS) is a domestic water supply project that uses Missouri River water treated in Williston to support the municipal, rural, and industrial needs throughout five counties in northwest North Dakota. In 2021, WAWS was serving approximately 60,000 water users, including 4,000 rural connections, 13 communities, eight industrial depots, and 38 fill ports. Nearly $364.8 million has been invested in WAWS by the state.

Owned by the State of North Dakota and overseen by a nine-member advisory committee, Northwest Area Water Supply's (NAWS) purpose is to deliver Missouri River water to residents in north central North Dakota. The project utilizes Lake Sakakawea, the largest reservoir on the Missouri River, with a storage capacity of nearly 24 million acre-feet. Development of the project faced challenges beginning in 2002 because of court appeals. However, in May 2019, NAWS was finally able to overcome its 17-year legal battle with the province of Manitoba and the state of Missouri. Upon completion, NAWS is expected to deliver water to approximately 81,000 people at a total cost of $380M. To date, about $66M has been committed to the NAWS project by the state.

The Red River Valley Water Supply Project (RRVWSP) is a state and locally sponsored project. The project is designed to bring Missouri River water to communities in central and eastern North Dakota. Upon completion, it's projected to serve nearly 50% of the population of the state. When RRVWSP is complete, it will be owned and managed by the Garrison Diversion Conservancy District, in collaboration with the Lake Agassiz Water Authority. In total, it is anticipated that this project will cost $1.1 billion through 2029. To date, the state has invested approximately $117.5M in this project.

Today, the Department of Water Resources' (DWR) vision states that Missouri River water will be put to beneficial use through its distribution across North Dakota to meet ever increasing water supply and quality needs. The DWR is focused on Missouri River water development and utilizing North Dakota's most abundant source of surface water for domestic and industrial use.

To promote these initiatives regarding the Missouri River, the DWR is collaboratively working with the Missouri River Joint Water Board, and Missouri River Advisory Council. Together, with a unified voice, we will continue to demonstrate support of the state's grass-roots efforts, provide education, advocacy, and engagement to improve the quality of life and strengthen the economy of North Dakota by managing the water resources of the state for the benefit of its people.

For more information, please visit the Department of Water Resources' website at www.dwr.nd.gov.

Each year, North Dakota residents and numerous tourists enjoy water-based recreational activities on the Missouri River.