

Western South Dakota Missouri River Development STAKEHOLDER REPORT

July 2020



WEST DAKOTA
WATER
Development District

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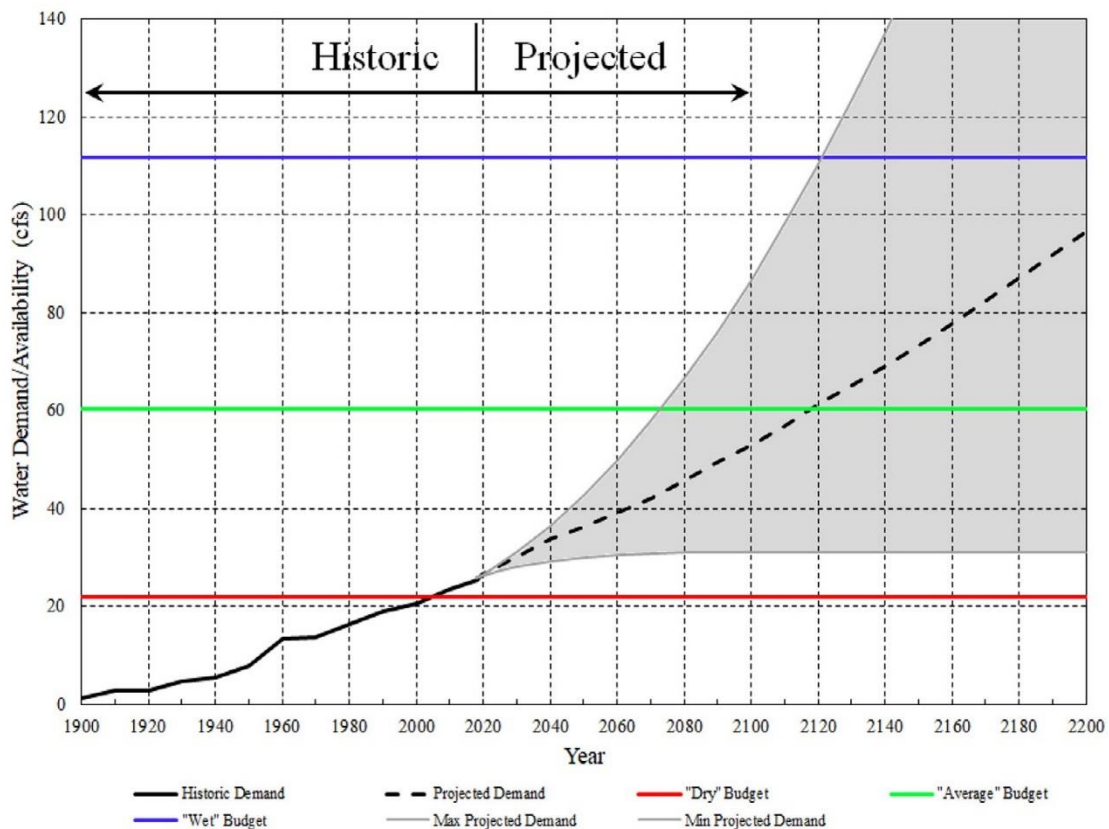
Overview of the Stakeholder Report

Securing a reliable source of water, both in quality and quantity, is one of the most critical challenges facing municipalities and rural areas today. This is of particular importance in the western half of South Dakota where the climate is more arid. With the rising population numbers, water demands are projected to exceed the supply, especially during drought conditions.

The West Dakota Water Development District (WDWDD) commissioned the South Dakota School of Mines and Technology for the Missouri River Water Allotment Study for Future Use Water Permit 1443-2. The conclusion presented in late 2019 was:

A strong need for new sources of water within the study area exists. (See Figure 1. Projected Water Demand/Availability in WDWDD Area.) As such, WDWDD should continue to maintain Future Use Permit #1443-2, which would require renewal in 2024. If water is to be brought to Western Pennington County via pipeline from the Missouri River, a project such as this would likely take decades to approve and construct. As population in the area increases, the need to ensure water security will grow ever greater. Therefore, local entities with a stake in our water security should pool their resources to ensure that they are proactive in securing future sources of water, one of which could involve water from the Missouri River.

Figure 1. Projected Water Demand/Availability in WDWDD Area



The WDWDD is taking the next step to explore bringing Missouri River water to Western South Dakota. Its role includes convening potential West River partners to begin a discussion on a future organization to sponsor a major infrastructure project. The WDWDD asked Banner Associates, Inc. (Banner) to scan various west river communities, Tribes, and water districts about interest in meeting to discuss a possible water project. ***This report provides information on those potential partners and confirms interest in joining in discussions to explore a Western South Dakota Missouri River project.***

Methodology

The WDWDD recruited a sub-committee of the entire board to meet on a regular basis with the Banner Project Team. This sub-committee included the Executive Director Dan Mulally, Director Robert Williams, Director Nathan Gjovik, and Director Wendy Nachtigall. Banner provided information to the subcommittee on the upcoming work in preparation of the Stakeholder Report, as well as interim progress reports.

Banner provided the sub-committee a list of communities, Tribes, and water systems to be contacted for interviews as part of the Stakeholder Report. The interviewers followed a script, which was developed to ensure a consistent message delivered to all potential stakeholders. Calls were made in June and July 2020. Some of the key points in the script include:

- Summary of the South Dakota School of Mines and Technology Report
- Interview was one of several across Western South Dakota
- No commitment to being part of a future organization
- No commitment for the purchase of water
- Initial organizational meetings would be facilitated and decisions made by consensus

A Fact Sheet was available to be sent to the interviewees (Appendix A). The results of the interviews are included in this Stakeholder Report.

Findings

The interviews were informal, in that key technical directors in each organization answered questions and indicated interest without consultation with their boards or elected bodies. As such, direct quotes and answers will not be attributed to the organization, but various comments and ideas emerged from the discussions:

- Make sure that all parties participate to their ability
- Look for outside funding (federal funding) to augment local efforts
- Bring in key experts from across the state and region to share lessons learned
- Have good supply, but interested in more water
- Have newly upgraded water treatment plant, but they could supply more water to other places but do not have the water rights
- Are in a good position for water, but willing to participate
- Some of the current lines (in an existing water district) are undersized, limiting capacity in certain areas. Initial studies in the 1990s looked at servicing water to Rapid City
- Have no feasible water source to treat
- Although there are various districts, county does not have water system

- Water demand outpacing supply
- Interested in participating as long as rates are not increased

Overall, the response to the request to be part of a discussion to explore the formation of an organization to address Missouri River water for Western South Dakota was well received. Many acknowledged that a large infrastructure project would need to be a joint effort and that it would be a multi-year, multi-agency funded effort.

Summary

The overall outcome of the interviews was positive, affirming the interest and need to discuss a possible major water infrastructure project to deliver Missouri River water to Western South Dakota. Although no one had a specific idea or plan of whom would be included or where the water would be delivered, those interviewed agreed to be part of a larger discussion to explore an organization and ultimate project further. Only two entities expressed no interest at this time.

As a result of the interviews, it is recommended to continue calling together stakeholders from Western South Dakota for the purpose of creating an organization to initiate the planning of a water project. It is anticipated that the organizational efforts would occur in the latter half of the calendar year 2020. The newly formed organization would continue its meeting for project development in 2021.

Next Steps

Banner will convene the interested communities, Tribes, water systems, and other individuals to create an organization to address their collective needs and begin a plan for the future development of a project to deliver Missouri River water to Western South Dakota. The goal is to have a Draft Organizational Charter in 2020, so that the group may begin meeting in 2021 to define its work and a project to bring Missouri River water to Western South Dakota.

Participants

All stakeholders listed in the Stakeholder Summary section of this report will be invited to the informational meetings about a new organization for Western South Dakota Missouri River Development. As discussed in this section, other parties who may be in a position to assist a new organization in planning for a water project would be invited in an ex officio capacity. The non-organizational individuals include representatives from regulatory and funding agencies, as well as other policy decision-making bodies.

Organizational Meetings

Banner will coordinate informational meetings, designed to provide additional information to water managers and decision makers in various parts of local governments to learn more about potential organizational structure to govern the development of the Missouri River project. All interested parties will commit to participate in a consensus process to establish the charter to govern the operation of the new organization. Background information on various charters will be provided to the participants.

Proposed meeting dates include one meeting per month, August – November 2020. The preferred dates are the second Thursday of each month.

August 13, 2020—introductory meeting, fact-finding of other water system governance. Formation of a Drafting Team, a subset of the group dedicated on working to write governance

documents for a possible new organization. The Drafting Team would meet in between meetings of the group as a whole.

September 10, 2020—additional fact-finding, work on membership of the new organization. Preliminary ideas for the geographic extent for a possible water project.

October 8, 2020—discussions on a final elements of the charter.

November 12, 2020—agreement on a preliminary charter for a Western South Dakota. The final charter is adopted when the group meets in 2021, to begin work on planning a project.

The final report of the outcome of the organizational meetings is December 31, 2020.

Meeting Protocols

Although the meeting protocols will be approved by the group, there are important tenets of decision-making to set forward. When there is a diverse group, making sure all voices are heard and respected is essential to good outcomes. In past work on Missouri River management decision-making, the National Research Council fundamental recommendations for success included:

- Participation by a broad spectrum of interest groups
- Inclusion of Tribal interests
- Continuous two-way communication with the public
- Visible participation by federal, state, and Tribal governments and non-governmental organizations
- Consensus decision-making by the stakeholder group
- Bounding the process with defined goals and with timelines for achievement (Source: July 2006 Volume 1, Issue 1 MRRIC Newsletter)

Although the goals of the Missouri River Recovery Implementation Committee are quite different from these efforts, adoption of similar goals would serve the new group well as discussions are initiated and decisions begin to be made about a potential water project for Western South Dakota.

Project Planning Meetings

Once an organizational charter has been developed and the organization formed, the new group will initiate steps to develop the plan for Missouri River water. All measures will be developed in compliance with applicable federal, state, and local laws and with the ability to develop the water system to utilize the water for the optimal beneficial use of its members. This work is anticipated to begin in 2021 and would be sponsored by participating entities, including WDWDD.

Stakeholder Summary

This section of the Stakeholder Report provides an overview of the communities and water development districts who were surveyed by Banner and have indicated interest in meetings to explore a possible infrastructure project to deliver Missouri River water to Western South Dakota. During the interviews it was emphasized that agreeing to meet was not a commitment to being part of a future organization, nor a commitment to purchase water. Rather, the meetings would define an organizational structure to continue discussions and project development.

In addition to stakeholders, other regulatory and funding organizations are encouraged to join the discussions. Such participants may include representatives from South Dakota Department of Environment and Natural Resources and the USDA Rural Development. In addition to technical staff, elected officials are encouraged to participate.

The following stakeholders are an initial list. It is recommended that the Stakeholder Report and invitees to organizational meetings be a living document. As other communities learn about the effort, there may be additional interest in joining the discussions. The current list of contacts includes the following entities:

Rural Water Districts

- Bear Butte Valley Water
- Black Hawk User Water District
- Perkins County Rural Water System
- Rapid Valley Water District
- Southern Black Hills Water System
- Tri-County/Mni Waste Water Company
- Tripp County Water Users District
- West River/Lyman-Jones

Municipality Systems

- City of Belle Fourche
- City of Box Elder
- Town of Buffalo
- Town of Hermosa
- City of Rapid City

Rural Water Districts

Bear Butte Valley Water, Inc.

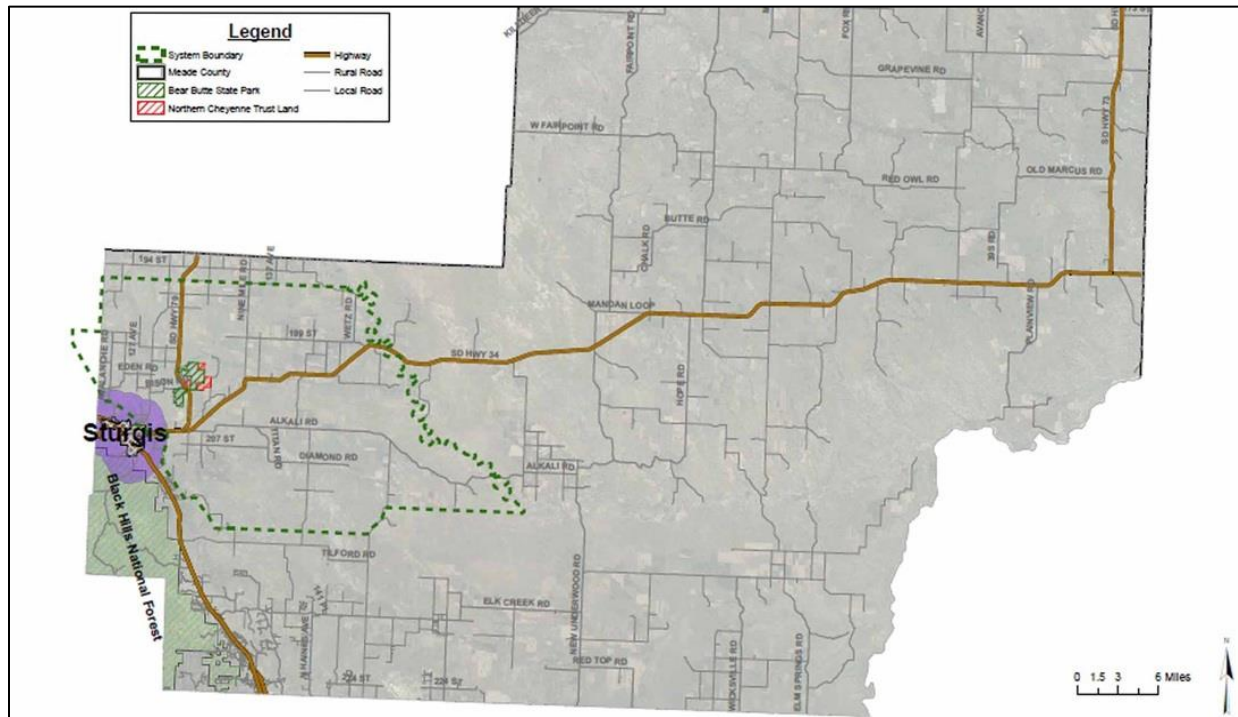
The Bear Butte Valley Water system started construction in 2014 to provide the rural residents of Meade county with access to a central rural water supply. The project started with the drilling of a deep well and continued with installation of 110 miles of pipeline, storage reservoirs, and pumping stations. The well extends 3623 feet down to the Madison Aquifer and was completed in 2014 as the first milestone of the project and the completion of the pipeline, storage reservoir, and booster station followed within the next two years.

System Facts

- Serves more than 488 customers
- 208 service connections
- 36,000 GPD
- One deep well
- One treatment plant

Contact

Dennis Kinslow, Manager
 Office: 605-206-0703
 PO Box 351
 Sturgis, SD 57785



Black Hawk Water User District

Black Hawk Water User District was first organized in 1949 and named under the Black Hawk Water Company. The effort to bring an adequate water source to the community of Black Hawk succeeded in 1950 when one deep well was installed, producing 750 gallons per hour, with the water being pumped into a 1,000-gallon holding tank. By 1956, 150 accounts were served by the system. A new pump house was built, and an old railroad water tower was moved in. In 1986, a new well was drilled into the Madison formation which began providing water at a rate of 550 gallons per minute, and a second well was constructed in the late 90's in the Madison Aquifer to provide the system with two primary sources of water and has two wells to serve as backups. System expansions resulted in the system supplying water outside of the Black Hawk community. Today, Black Hawk Water serves the communities of Black Hawk and Summerset and sells bulk water to the Stage barn Subdivision and the city of Piedmont.

System Facts

- Population Served 5,670
- Service Connection 1,500
- 600-800 gpm
- Three deep wells
- Two treatment plants
- Two back up deep wells

Contact

Ken Lebon, Manager
Office: 605-787-5777
office@bhwud.com



Perkins County Rural Water System, Inc. (PCRWS)

PCRWS is a water distribution system in northwestern South Dakota and began selling water to rural customers in 2004, added the City of Lemmon in 2005 and Town of Bison in 2006. Initial construction was completed in 2014. PCRWS serves three sub-districts: Lodgepole District, Bison District, and Lemmon District.

System Facts

- Serves 450 customers
- 324,000 gpd
- Purchases water from ND

Contact

Shiloh Baysinger
Office: 605-224-5608
pcrws@sdplains.com



Rapid Valley Water District

The Rapid Valley Water Service Co. was organized on January 19, 1962 and by 1965, approximately 300 households were members of the cooperative. The first wells were constructed in 1962 with one of the wells sourcing from the Lakota formation and produced water until 2010. A new microfiltration facility was constructed in 2007 transitioning to a self-sufficient water system eliminating the need to purchase water from the City of Rapid City. In 2018 the treatment plant was upgraded to an ultra-filtration system, which has increased capacity for future growth of the District.

System Facts

- Serves 9,792 customers
- Service Connections 3,917
- Three water treatment plants
- 743,000 gpd
- Two deep wells
- One surface water source

Contact

Rusty Schmidt, Manager
Office: 605-393-1050
rschmidt@rvsd.com
4611 Teak Drive
Rapid City, SD 57703



Southern Black Hills Water (SBHWS)

For 16 years, the Southern Black Hills Water System (SBHWS) has been providing a clean, abundant supply of water for customers across northern Fall River County and southern Custer County. The project began in 2004 with a single well, the Streeter Well, on Red Valley road in eastern Custer. The Madison aquifer well pumps 109 gallons of water per minute (gpm) and remains a primary source of the entire water system. Water is pumped through a treatment facility, built in 2010, where chlorine is added to make the water meet federal and state drinking water standards. From there, the water is pumped up to the hills to the reservoir facility located along Hwy 386 near the southern entrance to Wind Cave National Park. At the same time, a 140,000-gallon reservoir with a supervisory control and data acquisition (SCADA) software system was also built to hold and help distribute the water, as well as remotely monitor the system's status. Southern Black Hills Water is continuously working towards expanding their capacity to supply fresh water to people in the southern Black Hills region.

System Facts

- Serves 900 customers
- 120 miles of water main
- One water treatment plant
- 25,000 gpd
- Two deep wells
- One above ground reservoir
- Three booster stations

Contact

Don Peterson, Director
Office: 605-745-4669
sbh@goldenwest.net
26858 Hwy 385
Hot Springs, SD 57747



Tri-County/MNI Waste

The Mni Waste Water Company is a tribally chartered entity formed on September 29, 2003. The company operates the treatment plant, water distribution system, and all other functions of this regional water system. The Mni Waste Water System serves 14,000 members within the Dewey and Ziebach counties on the Cheyenne River Lakota Reservation in South Dakota. The Mni Waste water system receives its water from the Missouri River and travels 10.5 miles through a raw water intake, a newly developed Water Treatment Plant receives the raw water and distributes clean drinking water through water transmission lines to the populations of Faith, Isabel, Dupree, and Eagle Butte.

System Facts

- Serves 2,880 customers
- Service connections 1,300
- 922,000 gallons of water per day
- One 4.4 MGD water treatment plant
- Surface water from Missouri River

Contact

Leo (Erp) Fischer, Director
Office: tricity@lakotanetwork.com
605-964-7760
228 East Prairie Rd.
Eagle Butte, SD 57625



Tripp County Water User District (TCWUD)

TCWUD was developed by a group of local farmers and ranchers in need of quality potable water in the early 1970s. The TCWUD system construction began from wells drilled in Lawrence and Sedonia Wagner in 1977. By the fall of 1978, TCWUD was in full operation, serving 515 users with 500 miles of pipeline. The system started out with two wells that supplied 250 gallons per minute to a 500,000-gallon storage reservoir. TCWUD had several expansion projects after the main system was started, the first on in 1978 when 55 users were added with the Mellette County Expansion. In 1986, another large expansion project took place extending into the Wewela and Lucas service areas in which 230 more users were added. Expansions in 1991 and 1993 continued to add customers with the addition of the Witten, Iona and Carlock services area. In 2003-2004, TWCWUD continued to expand with taking over the East Gregory Water System in Gregory county, bringing the total number of customers to nearly 2000. TWCWUD has continually added more pipeline, tanks, and pump stations to expand the number of customers and communities with access to clean drinking water.

The current system relies on wells from the Valentine formation of the Ogallala Aquifer and only requires gas chlorine and liquid fluoride treatment. TCWUD has six active wells with a main storage capacity of 2 million gallons. The well field has the ability to pump up to 2600 gallons per minute. The counties served are Tripp, Gregory, and portions of Lyman, Mellette, and Todd. Towns served are: Colome, Dallas, Witten, Wood, Burke, Bonesteel, Herrick, Fairfax, and Charles. Native American Communities Served: Winner, Ideal, Dixon, Bull Creek, Milk's Camp, and Wood.

System Facts

- Serves 4,844 customers
- Service connections 1,905
- 1,811,000 gpd
- 2,200 miles of water main
- two water treatment plant
- Seven deep wells

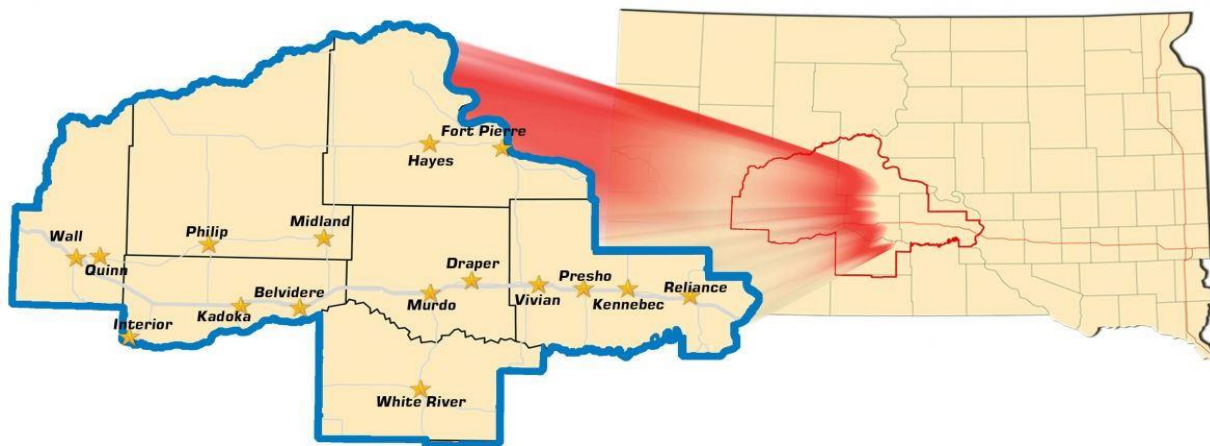
Contact

Lisa Stiehl, Manager
Office: 605-842-2755
lstiehl@goldenwest.net
1052 West 1st Street
Winner, SD 57780



West River/Lyman-Jones (WR/LJ)

West River/Lyman-Jones is one of four sponsor systems included in the Mni Wiconi Water Supply Project. In 1991, with the support of the West River Water Development group, West River/Lyman-Jones lead the effort in getting the approval of the Mni Wiconi Act in 1988. Mni Wiconi translating to, "Water is life," Is a Rural Water Supply Project was authorized by Public Law 100-516 on October 24, 1988 to provide a safe and adequate municipal, rural and industrial water supply to West River/Lyman-Jones, the Oglala Sioux Rural Water Supply System, the Rosebud Sioux Tribe Rural Water System and the Lower Brule Sioux Tribe Rural Water System. The West River/Lyman-Jones system utilizes the Missouri River via the Mni Wiconi Water Treatment Plant and three West River/Lyman-Jones Wells to service approximately 8,100 square miles in west central South Dakota. The system serves seven counties: Haakon, Jones, Lyman, Mellette, Stanley, Pennington, and portions of Jackson county. Towns served individually are Belvidere, Draper, Interior, Quinn, Reliance, and Vician; and towns served bulk are Ft. Pierre, Kadoka, Kennebec, Midland, Murdo, Philip, Presho, Wall, and White River.



System Facts

- Serves 9,128 customers
- System population 4,871
- Service connections 1,842
- 1,883,000 GPD
- 3,450 miles of water main

Contact

Jake Fitzgerald, Manager
 Office: 605-669-2931
jfitzgerald@wrlj.com
 307 Main Street
 Murdo, SD 57559

Municipality Systems

City of Belle Fourche



System Facts

- Serves 5,594 customers
- 950,000 GPD

Contact

Office: 605-892-2494
511 6th Ave
Belle Fourche, SD 57717

City of Box Elder



System Facts

- Serves 8,300 customers
- 907,000 gpd
- Three Madison deep wells
- Two booster stations

Contacts

Bob Kaufman, City Engineer
Office: 605-923-1404
bob.kaufman@boxelder.us
420 Villa Drive
Box Elder, SD 57719

Town of Buffalo



System Facts

- Serves 330 customers
- 52,000 GPD

Contact

Ryan Smith
Office: 605-641-0215
Townofbuf@sdplains.com

Town of Hermosa



System Facts

- 462 Customers
- 32,000 gallons per day
- Two deep wells

Contact

Chuck Ferguson, Public Works Director
Office: 605-255-4291
town@hermosasd.com
PO. Box 298
230 Main St.
Hermosa, Sd 57744

City of Rapid City



System Facts

- Serves 66,481 customers
- Service connections 18,551
- 747,000 gpd

Contact

Dale Tech, Public Works Director
Office: 605-394-4165
dale.tech@rcgov.org
300 6th Street
Rapid City, SD 57701

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Appendix A: Fact Sheet

INFORMATION on a PROPOSED WEST RIVER MISSOURI RIVER WATER PROJECT

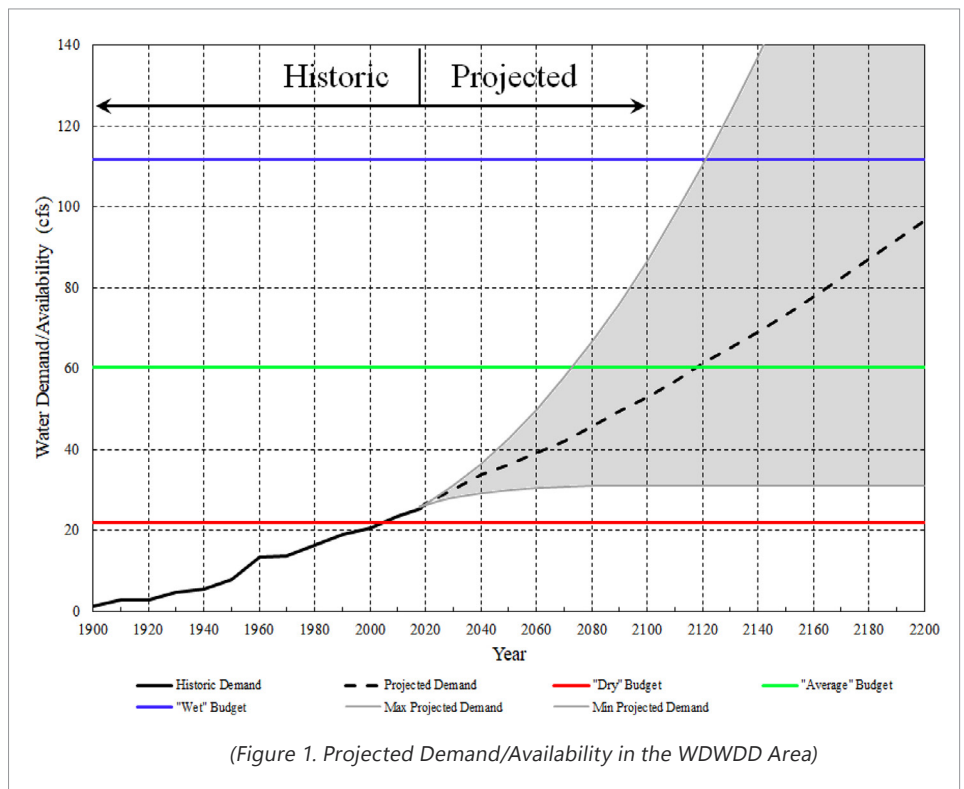
June 2020



West Dakota Water Development District (WDWDD) is a political subdivision, created for the purpose of promoting conservation, development, and management of water resources. Its geographic jurisdiction is Pennington County west of the Cheyenne River.

In 2019 WDWDD commissioned the South Dakota School of Mines and Technology to conduct a study on potential of future use of water from current water rights held on the Missouri River. The results indicated that local supplies currently meet demand in years of average or above average precipitation. However, during periods of prolonged drought (similar to those that occurred in the late 1980's, and early 1990's, as well as the early 2000s, the "region's ability to utilize its local water resources to meet demand is less certain and will continue to be reduced as population in the region expands. . . " as shown in Figure 1.

Subsequently, WDWDD contracted with Banner Associates, Inc. to survey rural water districts, local governments, and Tribes, about their interest in potential projects to utilize current water rights on the Missouri River. Once interested parties are identified, they will convene to create an organization to address their collective needs and begin to plan for the future development of a project to deliver Missouri River water to western South Dakota.



For a copy of the SDSMT study:

[http://www.westdakotawater.com/pdf/Projects/SDSMT Missouri River Final Report.pdf](http://www.westdakotawater.com/pdf/Projects/SDSMT%20Missouri%20River%20Final%20Report.pdf)

