

WATER PERMIT NO. 8809-3

Name of Applicant: **Darbi D. Bossman Limited Partnership**

Address: **4224 Boca Pointe Drive, Sarasota FL 34238** Phone: **605-351-6026**

Amount of Water Claimed: **1.78 cfs** Total Acres: **160**

Source of Water Supply: **Groundwater**

Water to be used for: **Irrigation** County: **Turner**

Type of Waste Disposal System:

Location: **Approx. 5 miles southwest of Lennox SD**

PRIORITY Date Received: **10-30-23**

Application/License Fee: **\$1,050.00**

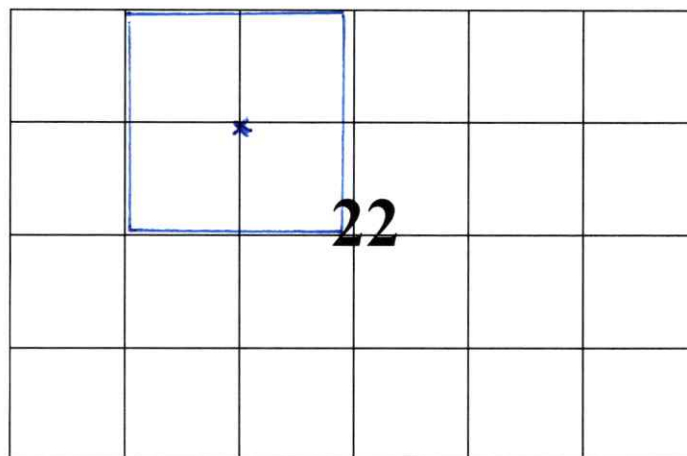
Corrected Application Received: **11-29-23**

Period of Annual Use: **May 1 – September 30**

Remarks: **Operator is Brett Petersen**

Diversion Point: **center of NW 1/4 Sec 22-T98N-R52W**

Land to be Irrigated: **NW 1/4 Sec 22-T98N-R52W**



Depth of Well: **150**

Well Driller: **Darryl Verley Well Drilling**

Remarks:

Type of Map: **aerial**

Reviewed and the Number Assigned on: **12-04-23**

By: **Rachel Rodriguez**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8809-3**

Date of first receipt of application October 30, 2023.

Date of return to applicant for corrections, amendments or changes November 13, 2023.

Date of receipt of corrected application November 29, 2023.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8809-3 to Darbi D. Bossman Limited Partnership, 4224 Boca Pointe Drive, Sarasota FL 34238 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 8809-3 appropriates 1.78 cubic feet of water per second from one well to be completed into the Upper Vermillion Missouri: North Aquifer (approximately 150 feet deep) located in the center of the NW 1/4 Section 22 for irrigation of 160 acres located in the NW 1/4 Section 22; all in T98N-R52W. This site is located approximately 5 miles southwest of Lennox SD.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is October 30, 2023.
4. The date of approval of Permit No. 8809-3 is February 20, 2024.
5. One-fifth of the construction is to be completed on or before August 20, 2026.
6. All construction is to be completed on or before February 20, 2029.
7. Water is to be put to beneficial use on or before February 20, 2033.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8809-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8809-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Eric Gronlund
Eric Gronlund, Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

MAR 08 2024
date



FORM 2: Application for irrigation in South Dakota
(type or print)

RECEIVED
Oct 30, 2023
NOV 29 2023
OFFICE OF WATER
PAID
NOV 29 2023
Ck# 8962
Rec't# 11/29/23

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8809-3</u> Hydrologic Unit <u>10170102</u> Basin <u>Vermillion</u> Newspaper <u>Turner Co New Era</u> <u>Argus Leader</u> (office use only)
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Application for Permit to Appropriate Water for Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____
(Use predates Mar 2, 1955)

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

1. Name to Appear on Irrigation Permit Darbi D. Bossman Limited Partnership

Note: The "Name to Appear on Irrigation Permit" must be the name in which the property to be irrigated is held in.

Mailing Address 4224 Boca Pointe Drive Sarasota FL 34238
(Address) (City) (State) (Zip Code)
Phone _____ Mobile 60535166 Email pbpfarms@gmail.com

2. Amount of water claimed 1.78 *CFS or 800 **GPM ***AF Total Acreage 160
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Ground-Upper Vermillion Aquifer

4. Location of point of diversion 1 Well in the center of the NW1/4 of section 22-98-52

(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Turner

5. County or counties where water will be used Turner

6. Annual period during which water is to be used May-September

7. List below each forty-acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	<u>NW</u> Land Description	Acres
SE1/4 of NW1/4-22-98-52	40	SW1/4 of SW 1/4-22-98-52	40
NE1/4 of SW 1/4-22-98-52	40	NW1/4 of SW 1/4 22-98-52	40
<u>NW</u>		<u>NW</u>	

8. Give a description of the project. (Attach sheet if more space is needed)

Drill a new well and install a new pivot to irrigate 160 acres in the NW 1/4 of 22-98-52

I, [Signature], the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

2021-08

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

Supplemental Information

(type or print)

1. Well Information (check one or both as applicable)

☒ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 1 Have test holes been drilled? ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by _____

For either existing or proposed wells:

c) Well Depth (required) 150 Depth to Top of Water Bearing Material 115 Depth to Water from Surface 27

d) Distance to nearest domestic well on applicant's property _____ Property owned by others 2600

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

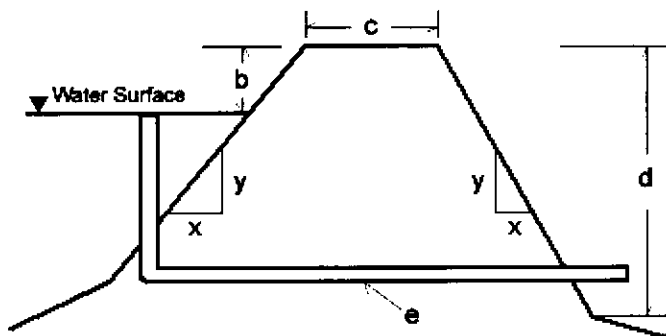
Upstream _____

Downstream _____

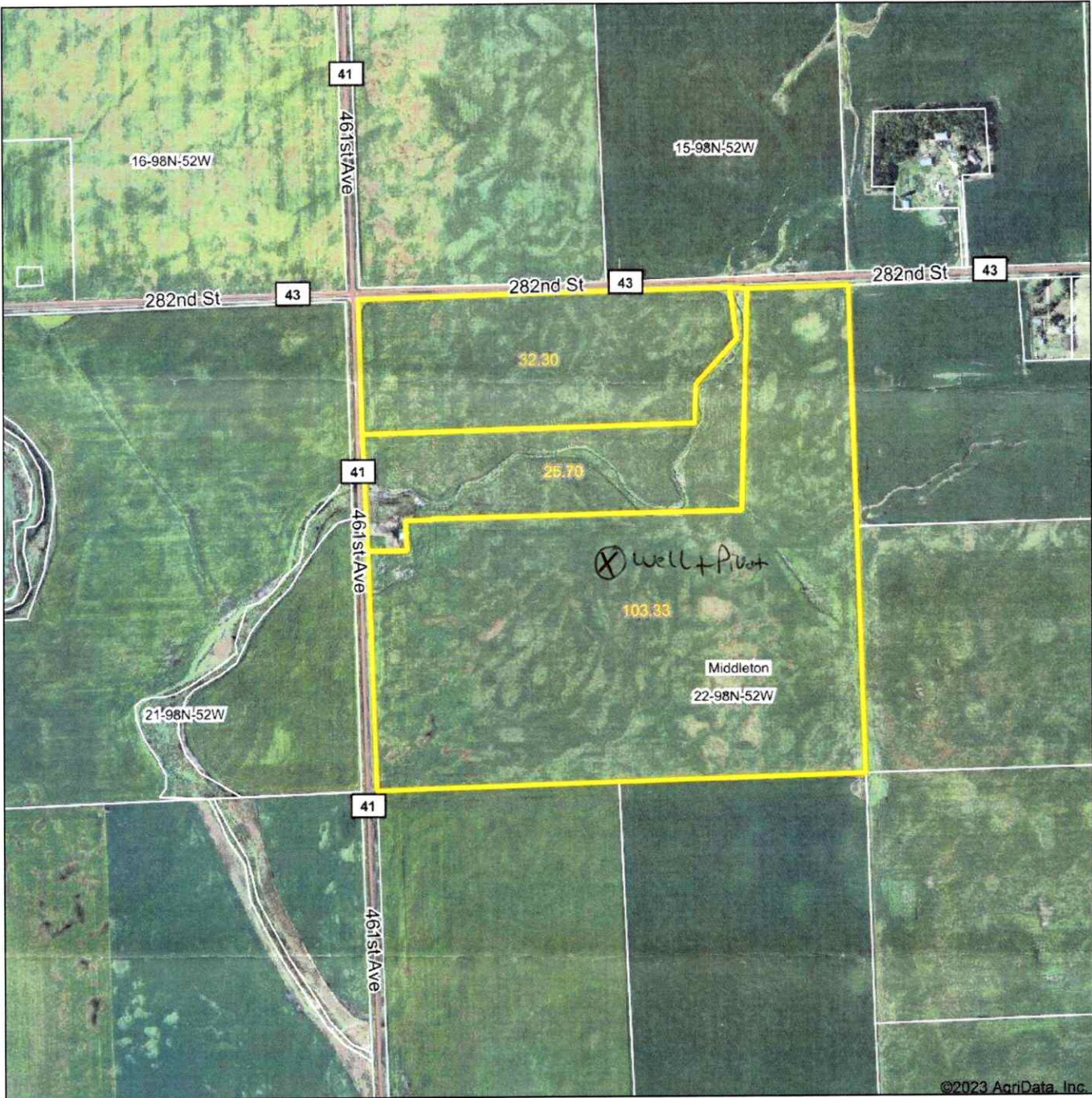
h) Area of Impoundment _____

i) Storage _____ Acre Feet

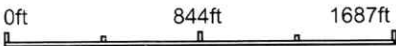
j) Drainage Area Above Dam _____ Acres



Aerial Map



Boundary Center: 43° 17' 53.62, -96° 58' 44



22-98N-52W
Turner County
South Dakota



11/24/2023

Maps Provided By:
surety
CUSTOMIZED ONLINE MAPPING
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Field borders provided by Farm Service Agency as of 5/21/2008.

98N 52W
Section: 09

98N 52W
Section: 10

98N 52W
Section: 11

98N 52W
Section: 16

98N 52W
Section: 15

98N 52W
Section: 14

98N
Section:

282 ST

461 AVE

98N 52W
Section: 21

98N 52W
Section: 22

10170102 Vermillion

98N 52W
Section: 23

283 ST

98N 52W
Section: 28

98N 52W
Section: 27

98N 52W
Section: 26

284 ST

98N 52W
Section: 33

98N 52W
Section: 34

98N 52W
Section: 35

462 AVE

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date November 29, 2023

RECEIVED OF PBP Farms for Darbi D. bossman Limited Partnership 4224 Boca Pointe Drive Sarasota FL 34238

The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>8809-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$850.00
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8809-3</u>	\$200.00
Fee for Filing Transfer Form _____	\$ _____
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law) TOTAL	\$1050.00

By Eric Gronlund
Chief Engineer
vm

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Monday, November 13, 2023 9:41 AM
To: PBP Farms
Subject: Water Permit for Irrigation Application
Attachments: T98N-R52W.pdf

Good morning,

I received another application for Darbi D. Bossman Limited Partnership which needs the following items:

- Attached is a map – please mark the location of the well(s) and outline the area to be irrigated.
- The application fee of \$850 and the inspection fee of \$200 comes to a total of \$1,050.00.
- Both applications (Darbi D. and Daric D. Bossman) need to be signed. Please send the signed first pages of both applications.

I spoke with an engineer and he said the existing well log you have is okay to send. Once I am in receipt of the items above, I can begin to process your applications.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8809-3, Darbi D. Bossman Limited Partnership**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Agriculture and Natural Resources concerning Water Permit Application No. 8809-3, Darbi D. Bossman Limited Partnership, 4224 Boca Pointe Drive, Sarasota FL 34238.

The Chief Engineer is recommending APPROVAL of Application No. 8809-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board with the following qualifications:

1. The well approved under Water Permit No. 8809-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8809-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund, Chief Engineer
January 29, 2024

Report to the Chief Engineer
On Water Permit Application No. 8809-3
Darbi D. Bossman Limited Partnership

January 24, 2024

Water Permit Application No. 8809-3 proposes to divert water at a maximum instantaneous diversion rate of 1.78 cubic feet of water per second (cfs) from one well to be completed into the Upper Vermillion Missouri: North aquifer (approximately 150 feet deep) located in the center of the NW $\frac{1}{4}$ of Section 22 for the irrigation of 160 acres located in the NW $\frac{1}{4}$ of Section 22; all in T98N-R52W. The site of interest is located approximately five miles southwest of Lennox, SD in Turner County.

AQUIFER: Upper Vermillion Missouri: North (UVM: N)

HYDROGEOLOGY:

The Upper Vermillion Missouri aquifer is a glacial outwash that is composed of fine sand to medium-pebble gravel (Lindgren and Hansen, 1990). The aquifer generally lays in a bedrock valley that trends north to south and underlies portions of Clay, Lincoln, and Turner Counties (Holmes and Filipovic, 2015). From 2013 to 2014, the SD DANR-Geological Survey completed a study to further understand the geologic and hydrologic conditions of the Upper Vermillion Missouri aquifer (Holmes and Filipovic, 2015). As a result, the aquifer is now considered as three management units (i.e., North, South, and West) that were adopted by the Water Management Board meeting on March 6, 2014 (Buhler, 2015; Holmes and Filipovic, 2015). The proposed diversion point for this application is located in the North management unit of the Upper Vermillion Missouri aquifer.

Most of the Upper Vermillion Missouri aquifer is overlain by till that can be up to 160 feet thick, or nonexistent (Holmes and Filipovic, 2015). The direction of groundwater movement in the Upper Vermillion Missouri aquifer is generally to the south/southeast (Lindgren and Hansen, 1990; Holmes and Filipovic, 2015). The areal extent of the Upper Vermillion Missouri: North aquifer is approximately 38,100 acres (Figure 1) (Buhler, 2014). The Upper Vermillion Missouri: North aquifer is generally buried and confined but can be locally unconfined in locations where the Parker-Centerville aquifer directly overlies it and is in hydraulic connection with it (Holmes and Filipovic, 2015; Kilts, 2023). The Upper Vermillion Missouri: North and Parker-Centerville aquifers are in direct hydraulic contact over approximately 2,930 acres (Figure 1) (Buhler, 2015).

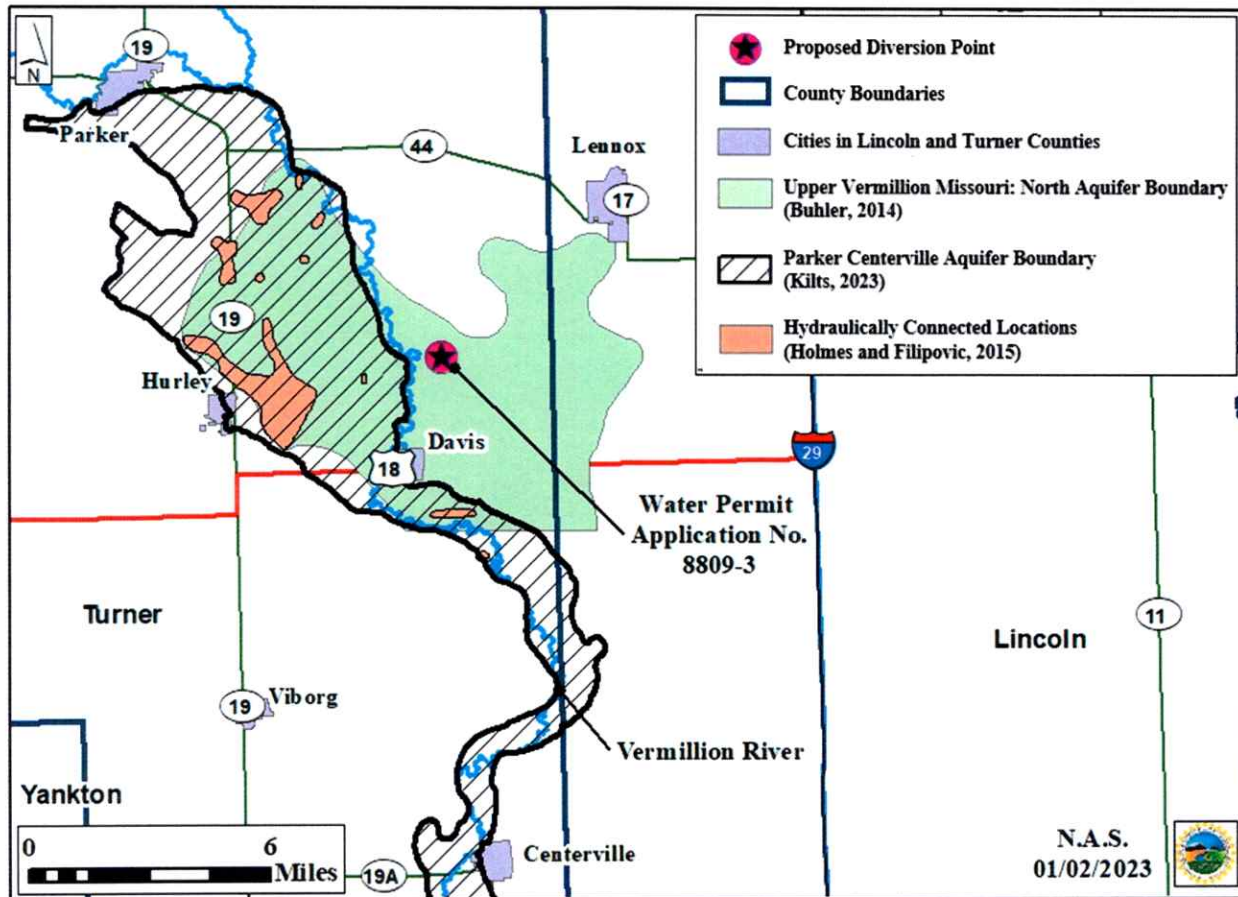


Figure 1. Map of the approximate UVM: N aquifer boundary (modified from Buhler, 2014), the approximate Parker-Centerville aquifer boundary (modified from Kilts, 2023), the hydraulically connected areas between the two aquifers (modified from Holmes and Filipovic, 2015), and the location of the proposed diversion point

No water well or test hole completion report was submitted with Water Permit Application No. 8809-3. Well completion reports on file with the DANR-Water Rights Program for wells completed into the Upper Vermillion Missouri: North aquifer within approximately two miles of the proposed diversion point for this application have saturated aquifer thicknesses ranging from approximately 20 to 100 feet, with the depth to the top of aquifer materials ranging from approximately 115 to 150 feet below the ground surface, and a static water levels at well completion varying from approximately 10 to 100 feet below the ground surface (SDGS, 2024; Water Rights, 2024d). Based on the well completion reports for nearby water rights/permits, and the lithologic logs on file for nearby observation wells, the Upper Vermillion Missouri: North aquifer is expected to be confined near the proposed diversion point (SDGS, 2024; Water Rights, 2024b and 2024d).

South Dakota Codified Law (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, “A permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant’s proposed use, that the diversion point can be developed without unlawful impairment of existing domestic water uses and water rights, and that the proposed use is a beneficial use and in the public

interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board as defined by SDCL 46-2-9 and 46-2-11.” This report will address the availability of unappropriated water and the potential for unlawful impairment of existing domestic water uses and water rights within the Upper Vermillion Missouri: North aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8809-3 proposes to appropriate water from the Upper Vermillion Missouri: North aquifer. The probability of unappropriated water being available from the aquifer can be evaluated by considering SDCL 46-6-3.1, which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.” The Upper Vermillion Missouri: North aquifer is not older than or stratigraphically lower than the Greenhorn Formation (Fahrenbach et al., 2010), and the applicant’s proposed use is not for use in a water distribution system as defined by SDCL 46-1-6(17). Therefore, the average annual recharge and average annual withdrawal rates to and from the Upper Vermillion Missouri: North aquifer must be considered.

OBSERVATION WELL DATA:

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires that the Water Management Board shall rely upon the record of observation well measurements in addition to other data to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.

Observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The DANR-Water Rights Program monitors ten observation wells completed into the Upper Vermillion Missouri: North aquifer (Water Rights, 2024b). These observation wells and their respective distances from the proposed diversion point are TU-2016A (approximately 4.4 miles southwest), TU-77I (approximately 2.8 miles southwest), TU-77H (approximately 2.8 miles southwest), TU-77G (approximately 2.3 miles west), TU-77F (approximately 2.3 miles west), TU-77D (approximately 5.3 miles northwest), TU-77Y (approximately 1.9 miles southeast), TU-77W (approximately 0.8 miles northeast), TU-77B (approximately 5.3 miles northwest), and TU-77L (approximately 4.1 miles southeast) (Water Rights, 2024b). The hydrographs for these observation wells are displayed in Figures 2 to 11 (Water Rights, 2024b). The data points utilized to construct the hydrographs are measurements of the static water level in the observation wells from the top of the well casing.

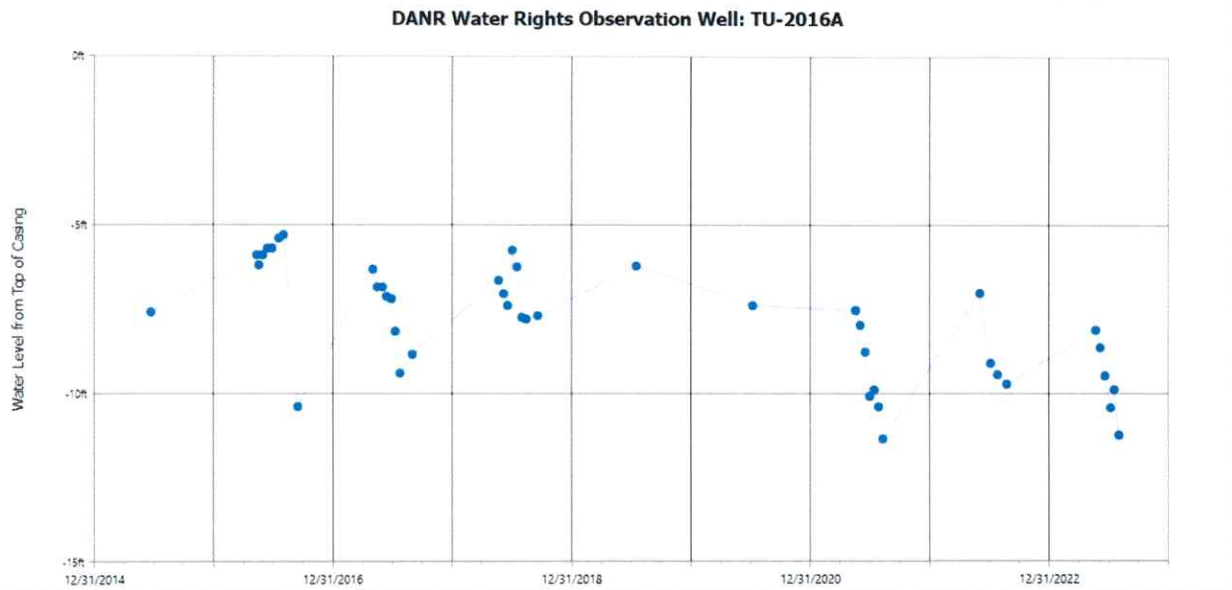


Figure 2. Hydrograph for observation well TU-2016A (Water Rights, 2024b)

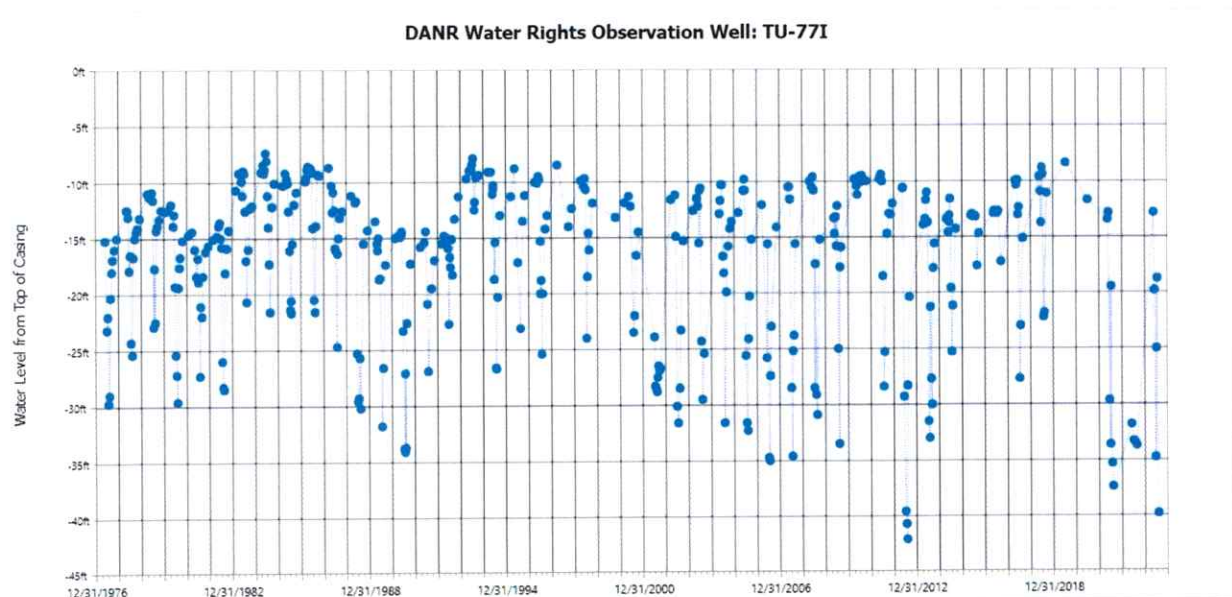


Figure 3. Hydrograph for observation well TU-771 (Water Rights, 2024b)

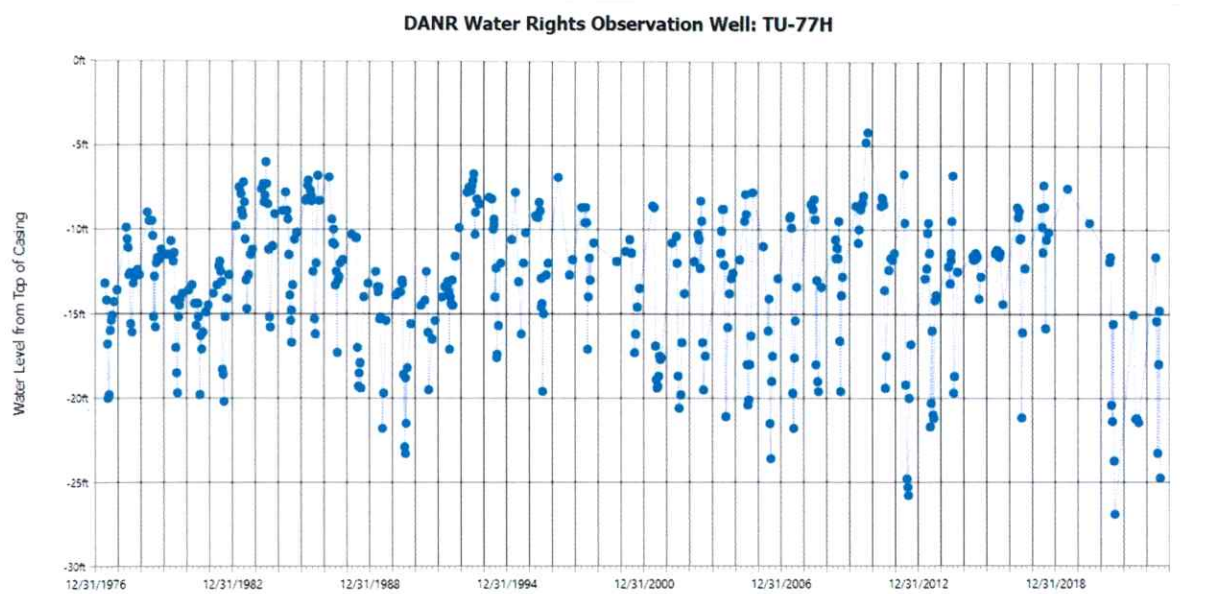


Figure 4. Hydrograph for observation well TU-77H (Water Rights, 2024b)

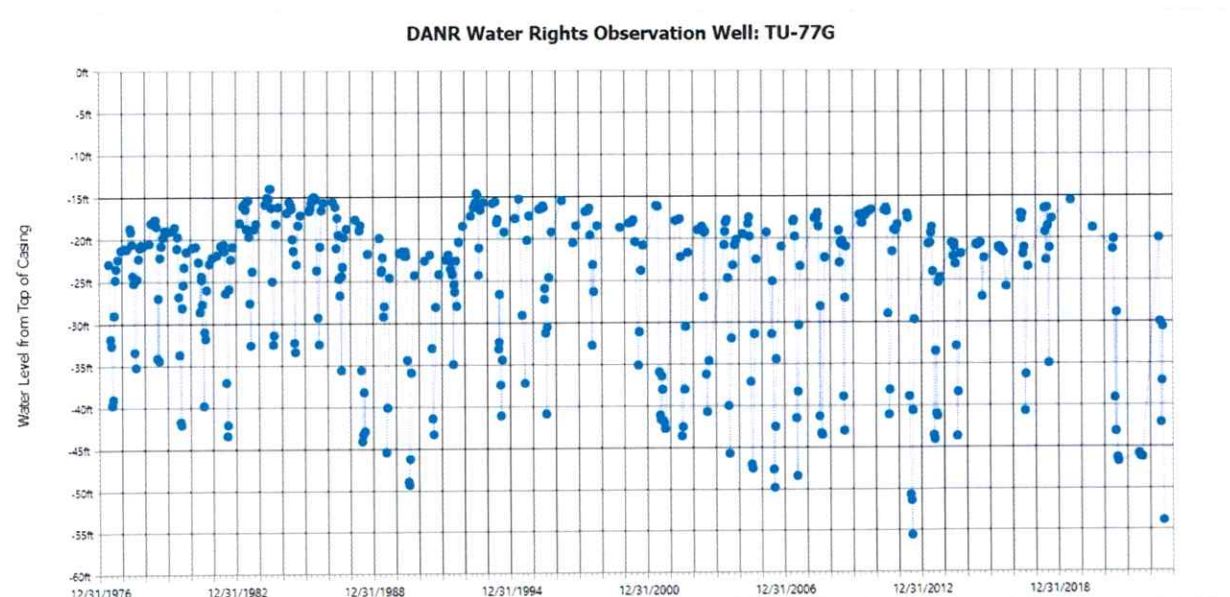


Figure 5. Hydrograph for observation well TU-77G (Water Rights, 2024b)

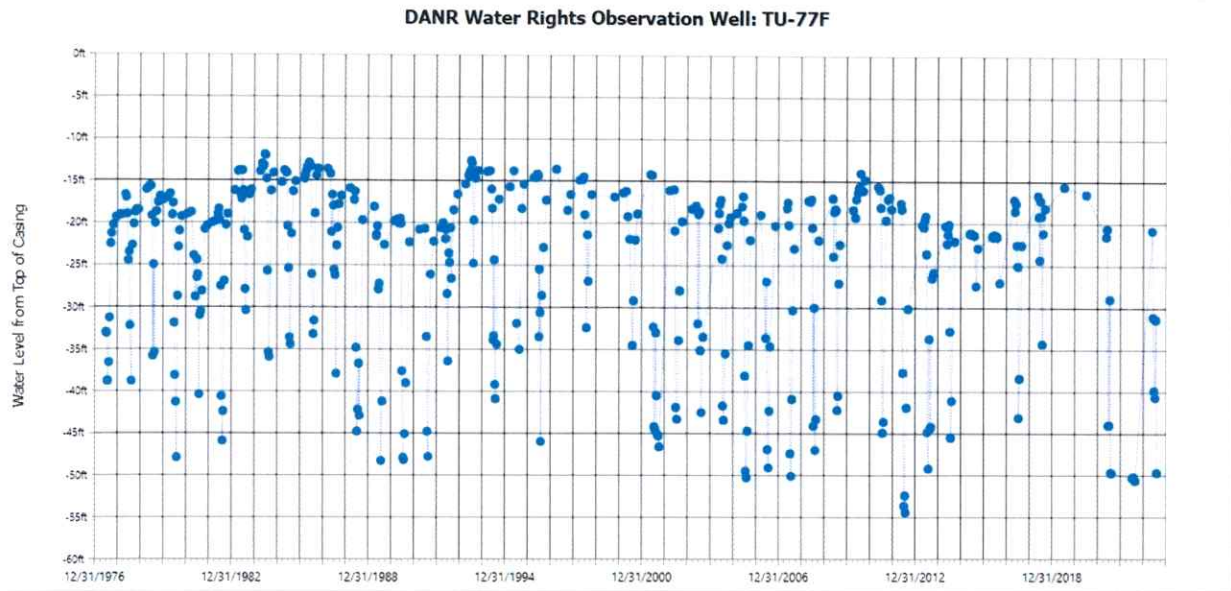


Figure 6. Hydrograph for observation well TU-77F (Water Rights, 2024b)

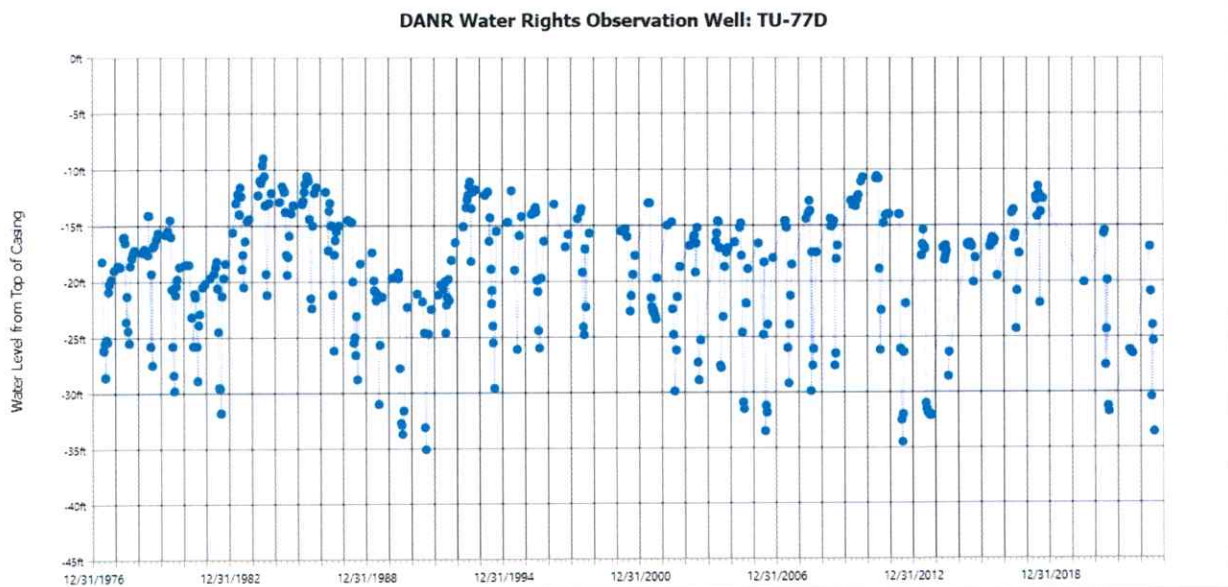


Figure 7. Hydrograph for observation well TU-77D (Water Rights, 2024b)

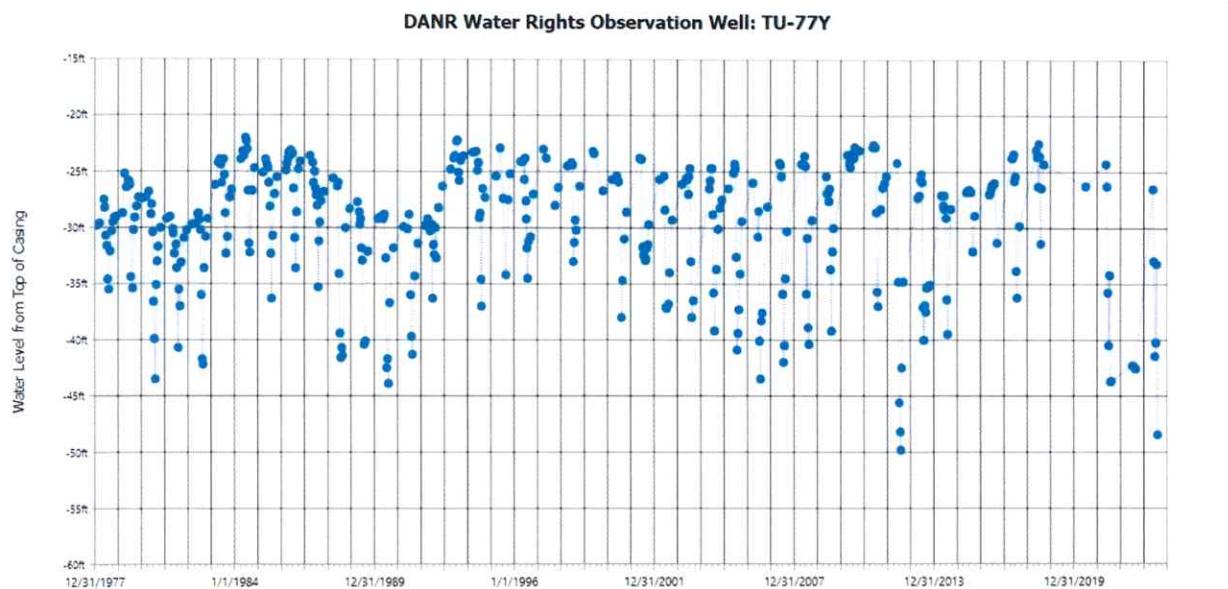


Figure 8. Hydrograph for observation well TU-77Y (Water Rights, 2024b)

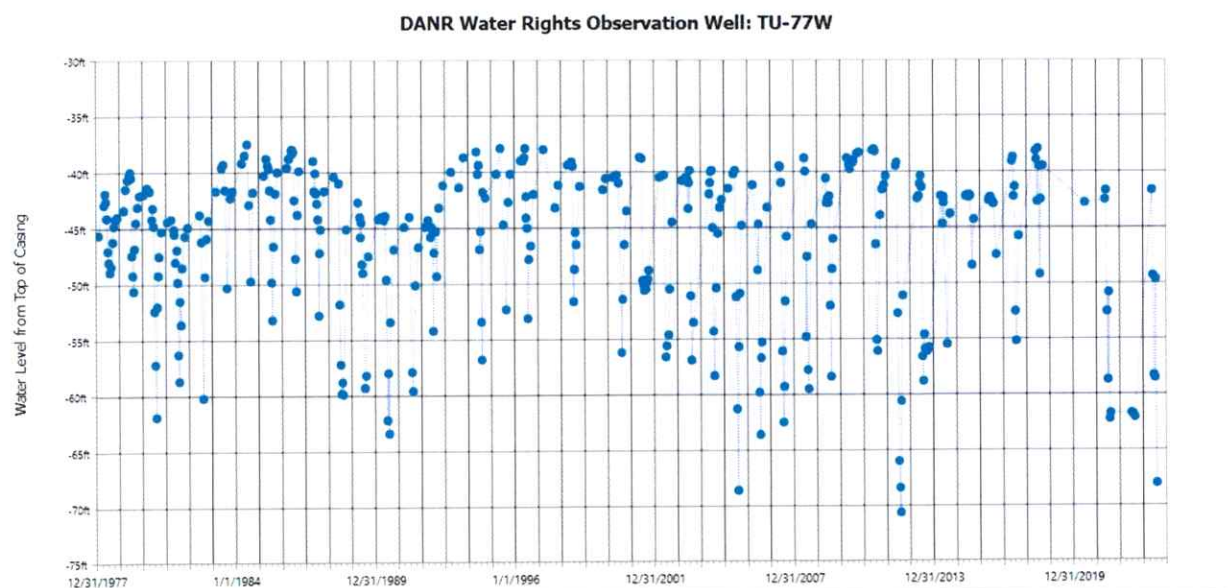


Figure 9. Hydrograph for observation well TU-77W (Water Rights, 2024b)

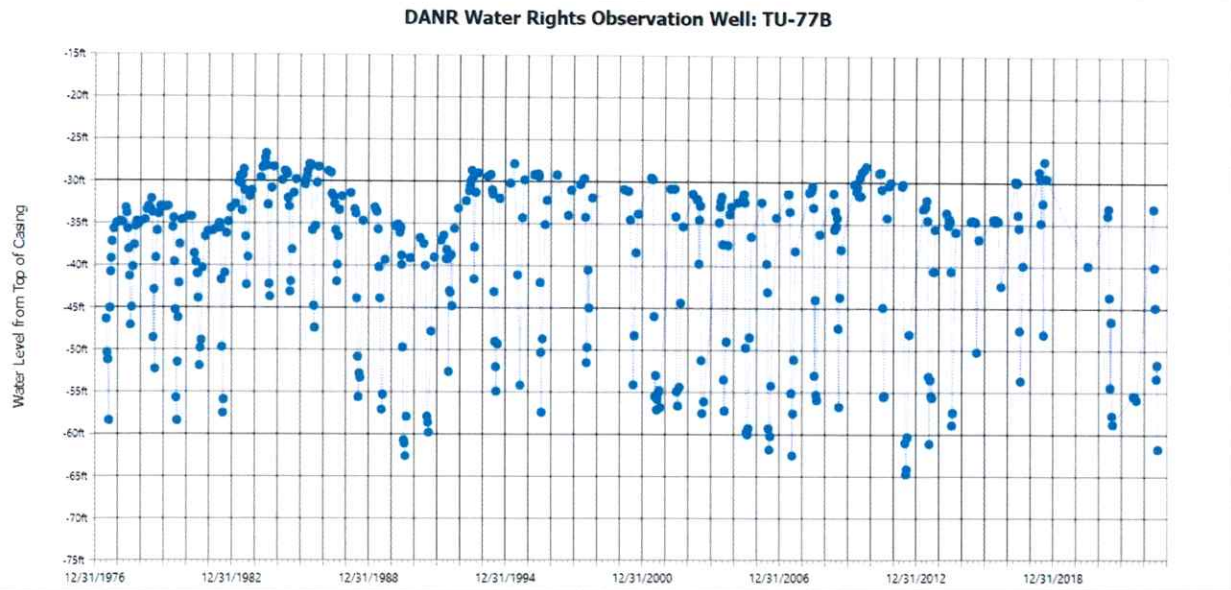


Figure 10. Hydrograph for observation well TU-77B (Water Rights, 2024b)

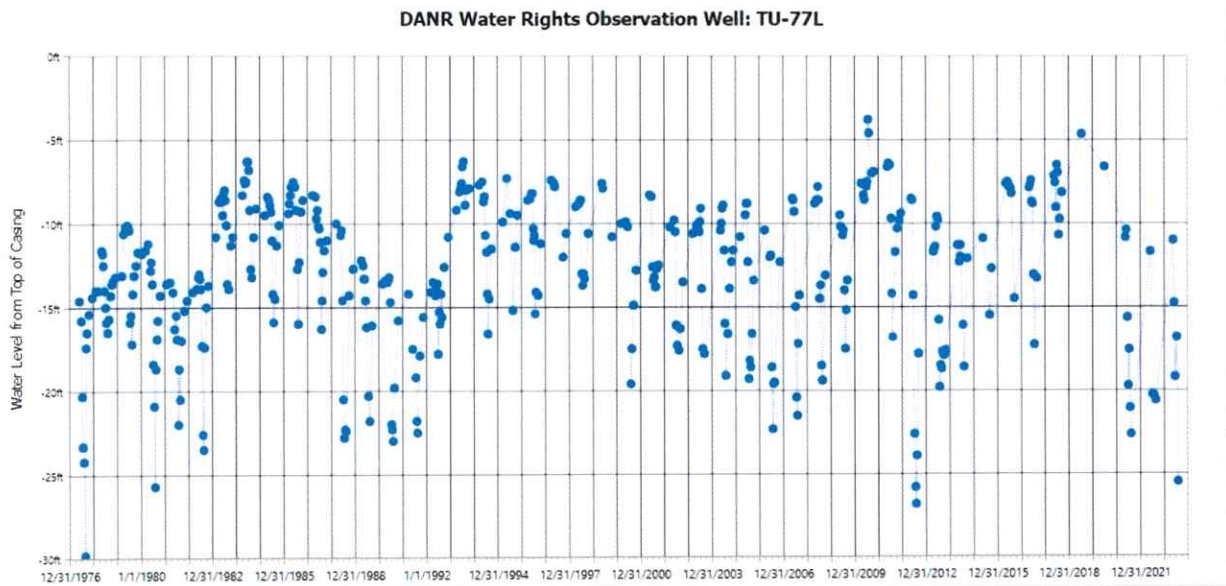


Figure 11. Hydrograph for observation well TU-77L (Water Rights, 2024b)

The water levels measured in the observation wells show that the potentiometric surface of the Upper Vermillion Missouri: North aquifer is typically less than 70 feet below the ground surface (Water Rights, 2024b). The hydrographs for observation wells completed into the Upper Vermillion Missouri: North aquifer generally display upward to stable trends over their respective period of record. The Upper Vermillion Missouri: North aquifer is generally under confined conditions, and the potentiometric surface in a confined aquifer is very responsive to pumping as a small change of water stored in the aquifer results in a fairly large change in the artesian head pressure in a well (Buhler, 2015; Holmes and Filipovic, 2015). Additionally, the water levels in the observation wells are typically measured during the same time of the year that irrigation pumping is occurring (Water Rights, 2024b). This can lead towards a bias representing lower water levels due to decreased artesian head pressure. However, the hydrographs for the observation wells completed into the Upper Vermillion Missouri: North aquifer document the aquifer returning to pre-pumping conditions before each irrigation season over the respective period of record. This means the trend is not fully representative of the “static” conditions of the aquifer, but rather shows the seasonal effects of pumping. This is worth noting in an extensively developed aquifer such as the Upper Vermillion Missouri: North aquifer. Especially since in the observation wells with periods of record dating to the late 1970’s, the spring 2022 reading is near equivalent or higher than the spring readings in the 1989-1991 dry period even with the increased development of the aquifer since that period.

Buhler (2015) created hydrographs using the earliest water level measured by the DANR-Water Rights Program in May of each year to account for biases in the hydrograph trends, which are introduced by most of the readings being measured when water levels were at their lowest during the irrigation season. Buhler (2015) noted that from November through April, there is generally no irrigation pumping occurring and limited recharge to the aquifer. This allows the early May water level measurements to be considered representative of nearly “static” conditions of the aquifer. When generating the hydrographs based off “static” readings, the earliest May reading was used; if a May reading was not available for the respective year, the reading closest to May 1 was used if it was within 45 days. Figures 12 to 20 show the water level measurements that are most representative of the “static” conditions of the aquifer.

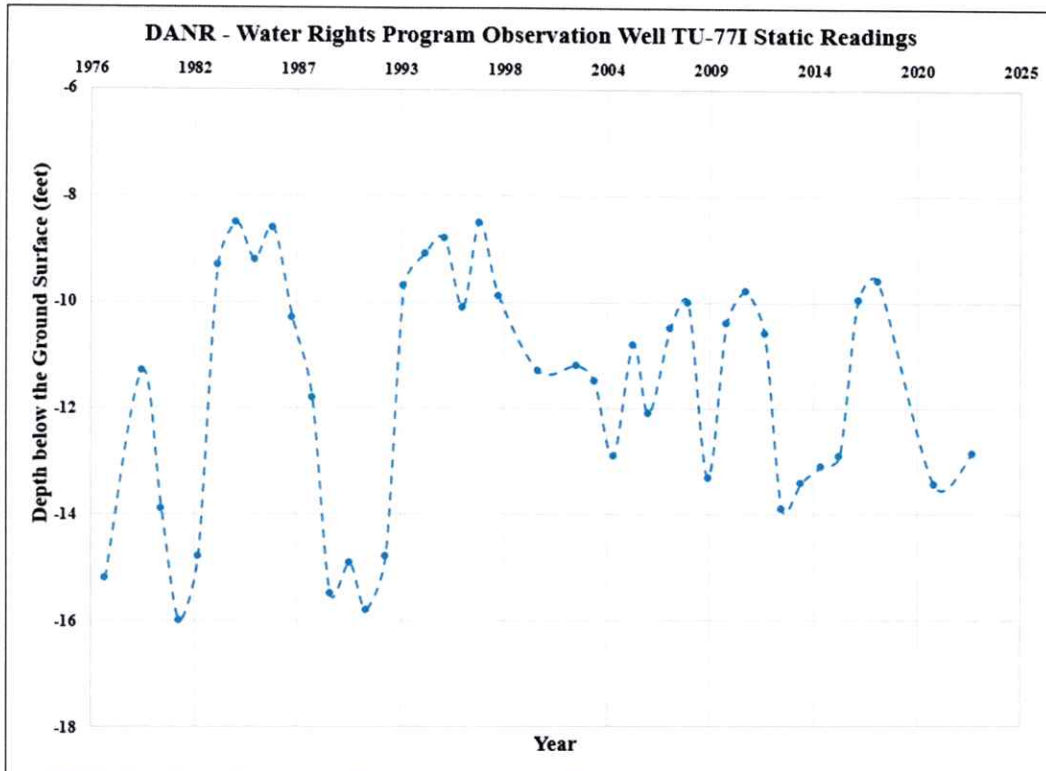


Figure 12. Hydrograph for static water level in observation well TU-77I (Water Rights, 2024b)

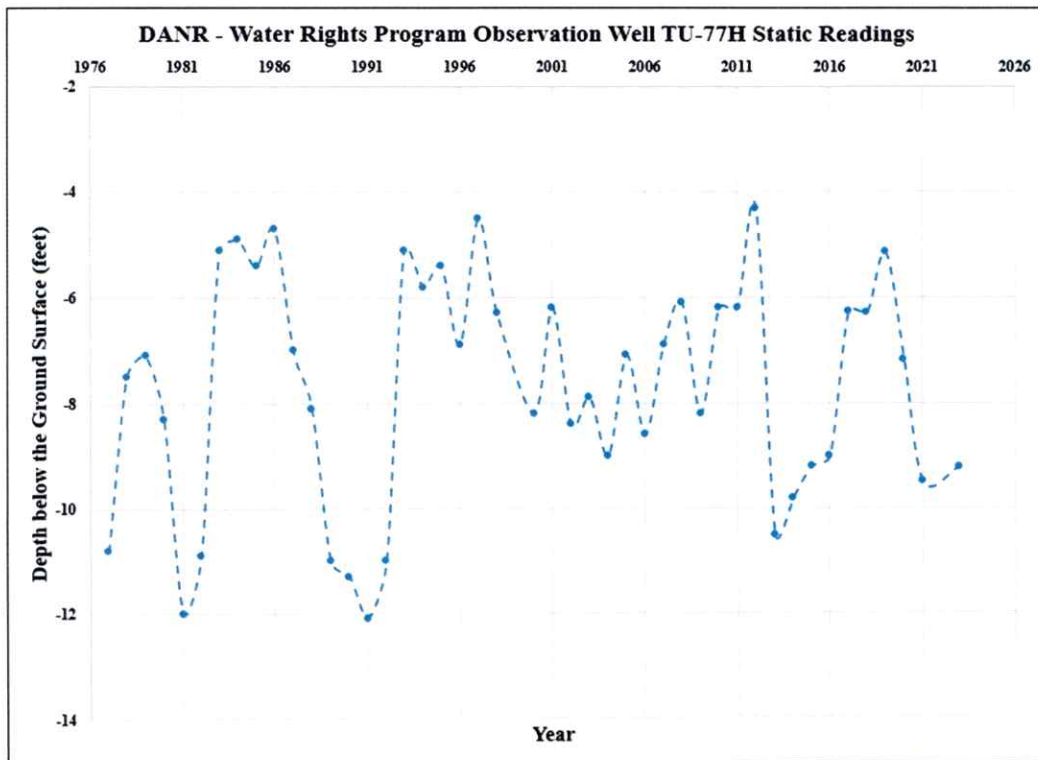


Figure 13. Hydrograph for static water level in observation well TU-77H (Water Rights, 2024b)

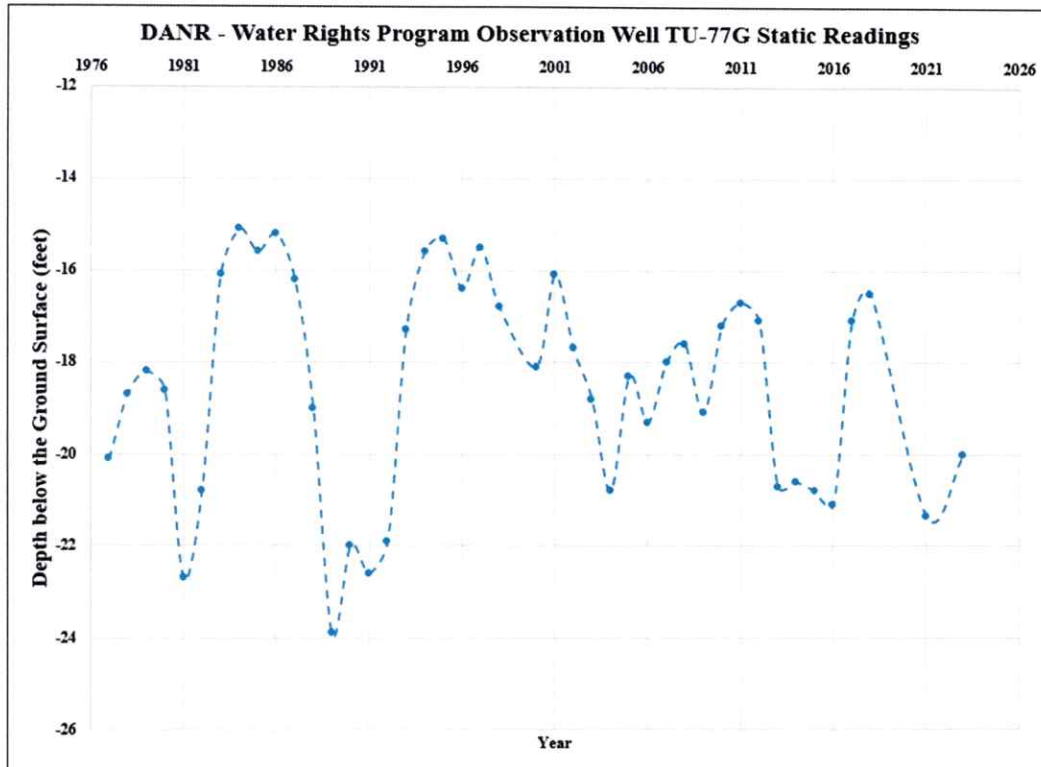


Figure 14. Hydrograph for static water level in observation well TU-77G (Water Rights, 2024b)

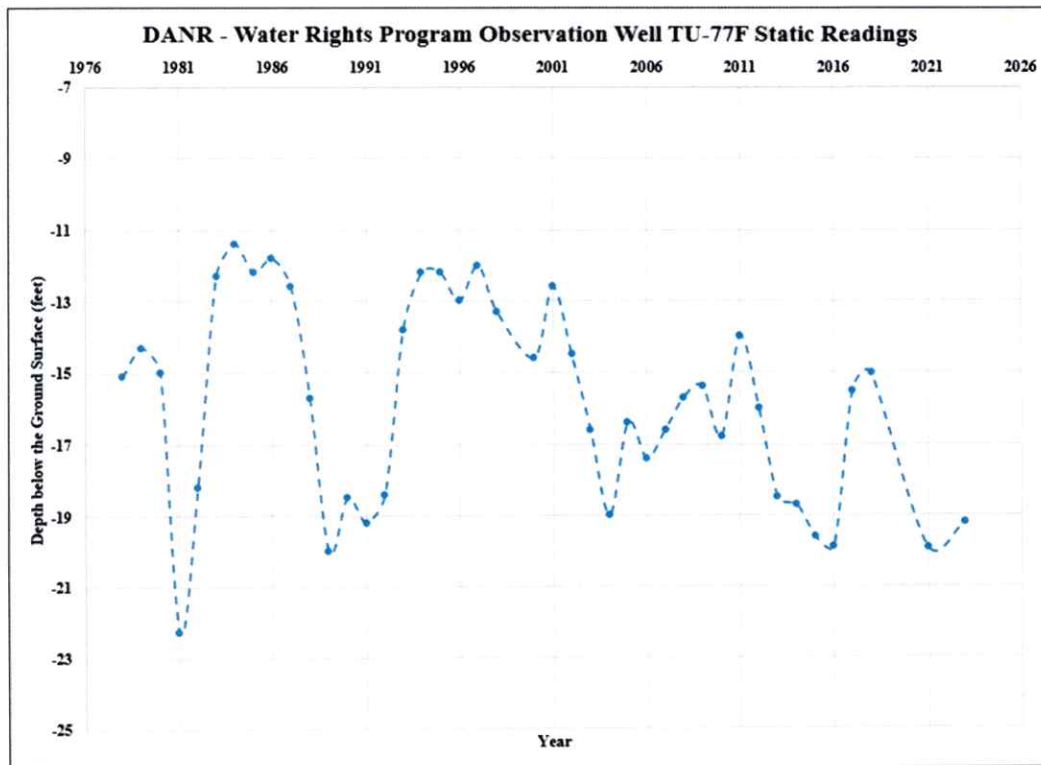


Figure 15. Hydrograph for static water level in observation well TU-77F (Water Rights, 2024b)

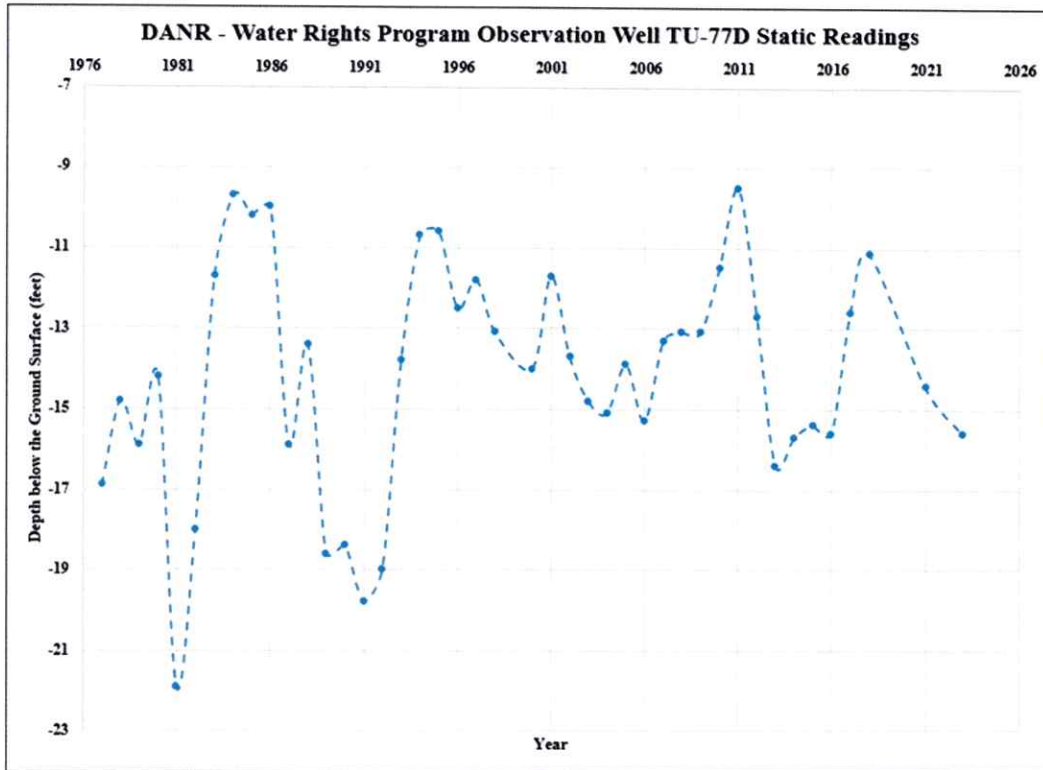


Figure 16. Hydrograph for static water level in observation well TU-77D (Water Rights, 2024b)

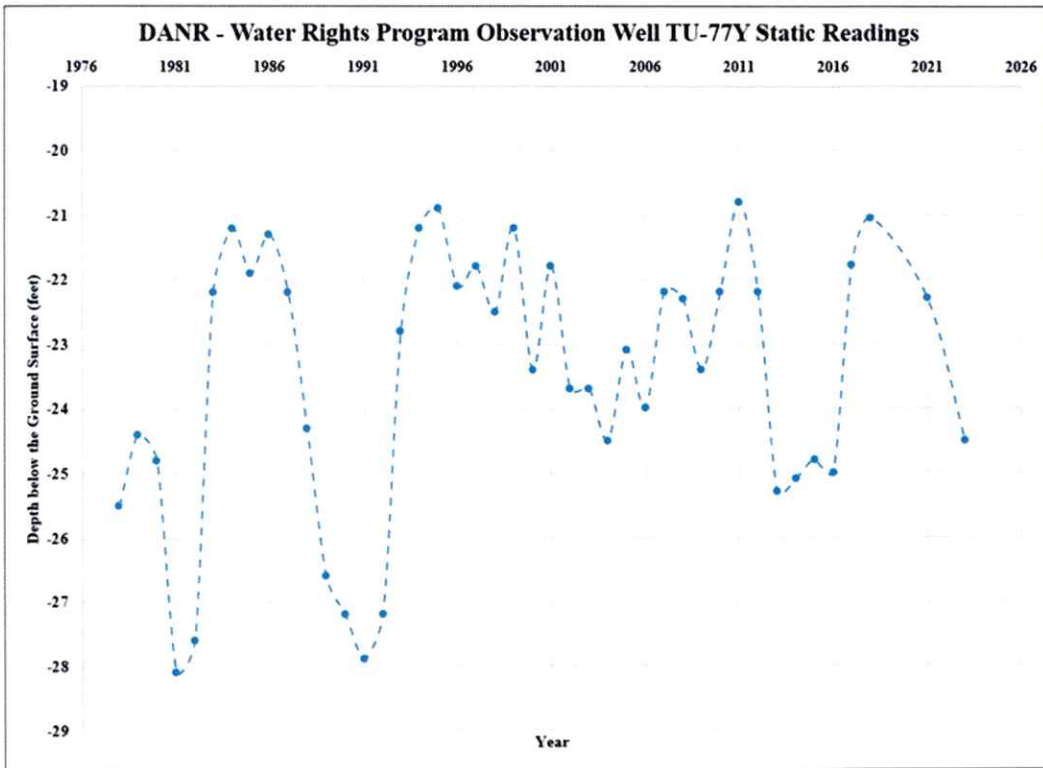


Figure 17. Hydrograph for static water level in observation well TU-77Y (Water Rights, 2024b)

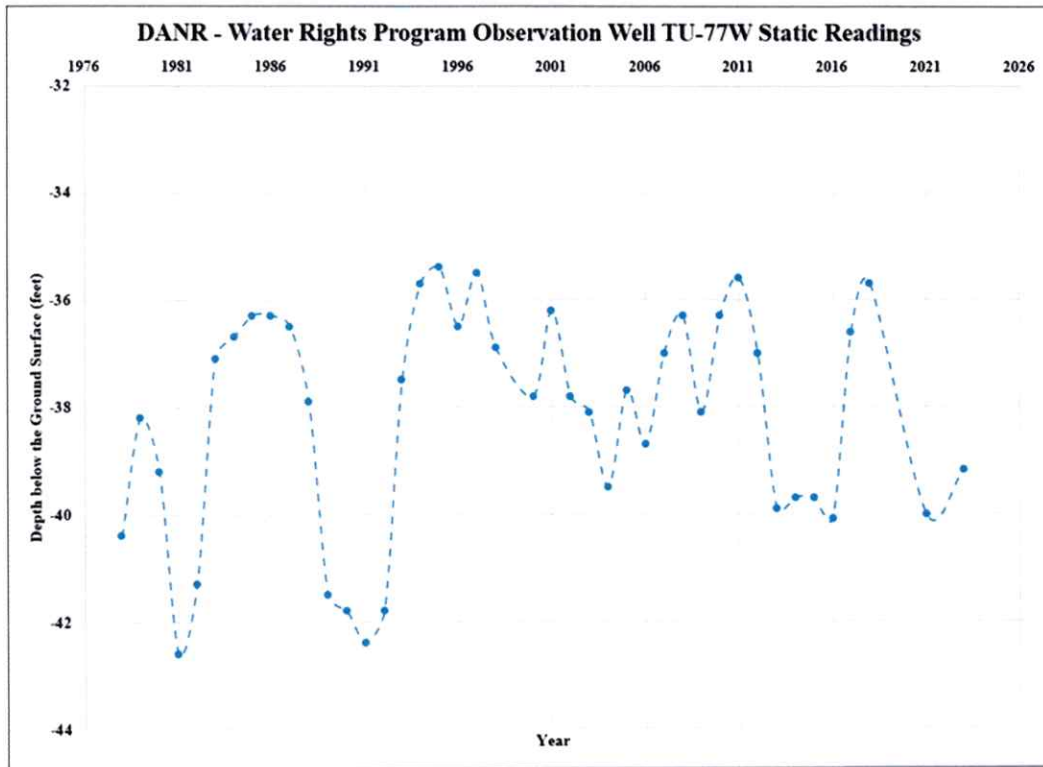


Figure 18. Hydrograph for static water level in observation well TU-77W (Water Rights, 2024b)

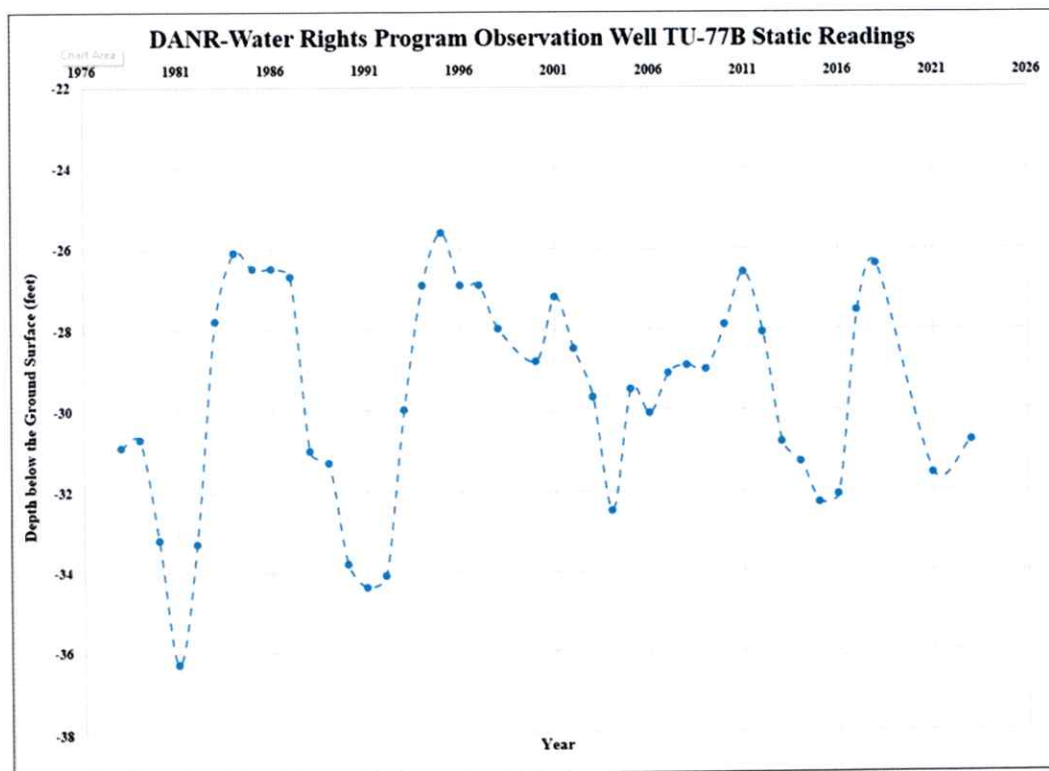


Figure 19. Hydrograph for static water level in observation well TU-77B (Water Rights, 2024b)

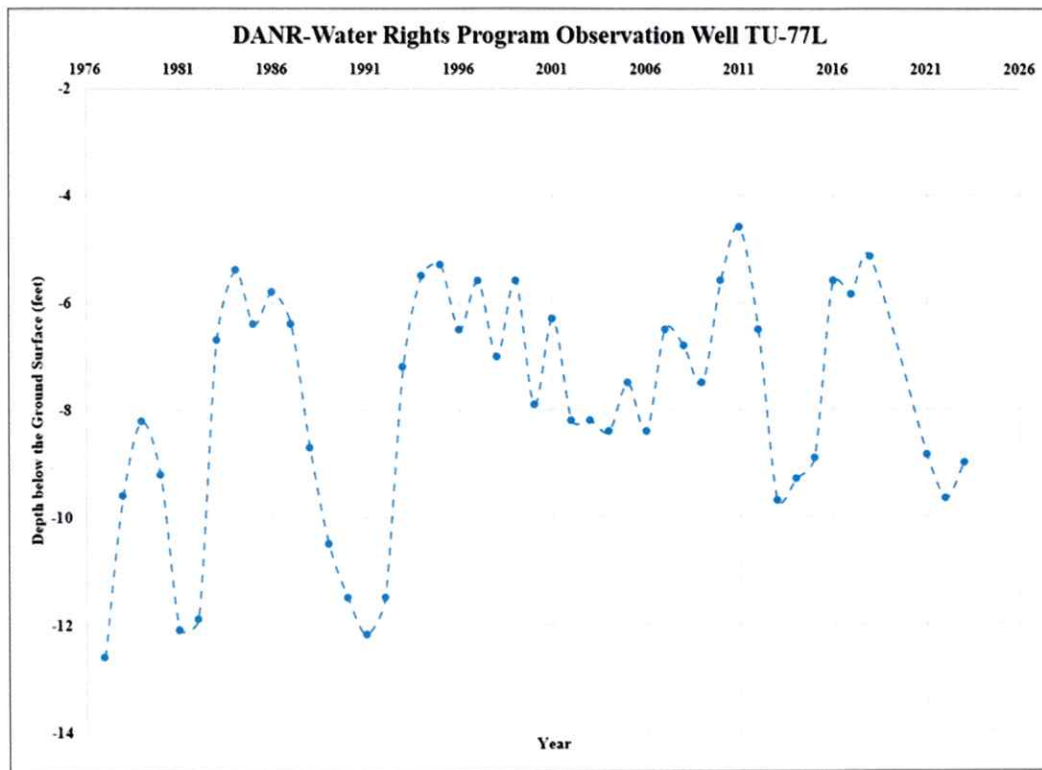


Figure 20. Hydrograph for static water level in observation well TU-77L (Water Rights, 2024b)

HYDROLOGIC BUDGET:

Recharge

Recharge to the Upper Vermillion Missouri aquifer occurs primarily through the infiltration of precipitation. Additional recharge occurs through leakage from the overlying Parker-Centerville aquifer where the two aquifers are in direct contact (Figure 1) (Holmes and Filipovic, 2015).

Buhler (2014) indicated there is not a reliable average annual recharge estimate for the North management unit of the Upper Vermillion Missouri aquifer. Therefore, comparison of the average annual recharge to the average annual withdrawal through a hydrologic budget specific to the North management unit of the Upper Vermillion Missouri aquifer is not feasible. However, for confined aquifers, Hedges and others (1985) recommended a recharge rate range of 0.15 to 0.60 inches per year for use by management and development programs. The areal extent of the Upper Vermillion Missouri: North aquifer is approximately 38,100 acres (Buhler, 2014); therefore, using the range from Hedges and others (1985) results in an average annual recharge rate to the Upper Vermillion Missouri: North aquifer of approximately 476 to 1,905 acre-feet per year. There is likely additional recharge (such as, where the aquifer is unconfined) that occurs to the aquifer that would not be accounted for by Hedges and others (1985) confined aquifer range. Observation well data show that the generalized recharge rate range estimated Hedges and others (1985) is likely much lower than the actual average annual recharge rate to the Upper Vermillion Missouri: North aquifer (Water Rights, 2024b).

Discharge

Discharge from the Upper Vermillion Missouri: North aquifer occurs primarily through well withdrawals and natural discharge to the Upper Vermillion Missouri: South aquifer (Water Rights, 2024d). Currently, there are 54 water rights/permits authorized to appropriate water from the Upper Vermillion Missouri: North aquifer, plus one pending permit – Water Permit Application No. 8807-3 requesting to irrigate 176 acres in Turner County (Water Rights, 2024c).

Table 1 summarizes the four non-irrigation water rights/permits authorized to appropriate water from the Upper Vermillion Missouri: North aquifer and the estimated annual use for each water right/permit as determined by their limiting diversion rate or annual volume. The amount of water that can be withdrawn was estimated by assuming the non-irrigation water rights/permits limited by an annual volume will withdraw the entire appropriated volume every year. It is estimated that the non-irrigation water rights/permits limited only by a diversion rate will pump at a maximum permitted diversion rate for 60 percent of the time. The Town of Davis was identified as being connected to TM Rural Water District and likely maintains the well for standby purposes (Drinking Water Program, 2024); as such, the average annual water use for this water right has been estimated to be zero acre-feet per year on Table 1.

Table 1. Estimated average annual water use from the non-irrigation water rights authorized to appropriate water from the Upper Vermillion Missouri: North aquifer (Water Rights, 2024c)

Permit No.	Name	Use	Status	Diversion Rate (cfs)	Annual Limit (acre-feet)	Estimated Use (acre-feet/year)
525-3	Town of Davis	MUN	LC	0.45		0*
5833-3	Advanced Prescription	COM	LC	0.11		47.8
6435-3	South Lincoln RWS	RWS	LC	2.45	900	900
6727-3	South Lincoln RWS	RWS	LC	1.95	900	900
					TOTAL:	1,848
Licensed Water Right; MUN: Municipal; COM: Commercial; RWS: Rural Water System *Identified as being connected to RWS						

Table 2 shows the average annual water use from the Upper Vermillion Missouri: North aquifer for South Lincoln Rural Water System as reported to the SD-DANR (Water Rights, 2024f). The reported withdrawals by South Lincoln Rural Water System listed on Table 2 show historically that the average annual use has been less than the appropriated volume that is estimated on Table 1 and the annual reported withdrawal has been relatively stable for more than 10 years (Water Rights, 2024c and 2024f). The estimated use based on the reported annual withdrawal rates by South Lincoln Rural Water System averaged on Table 2 will be used in the analysis.

Table 2. Calculated average annual water use from the Upper Vermillion Missouri: North aquifer for South Lincoln Rural Water System as reported to the SD-DANR (Water Rights, 2024f)

Water Right Nos. 6435-3 and 6727-3	
Year	Reported Annual Use (acre-feet)
2003	354
2004	583
2005	611
2006	599
2007	607
2008	779
2009	987
2010	1095
2011	1108
2012	673
2013	702
2014	763
2015	810
2016	776
2017	849
2018	808
2019	664
2020	326
2021	810
2022	825
Avg	736

Currently, there are 50 irrigation water rights/permits authorized to appropriate water from the Upper Vermillion Missouri: North aquifer (Water Rights, 2024c). Irrigation water rights/permits have been typically required to report their annual usage on an irrigation questionnaire since 1979. The estimated average annual withdrawal rate for the Upper Vermillion Missouri: North aquifer irrigation water rights/permits that have reported over the period of record (1979 to 2022) is approximately 4,406 acre-feet per year (Table 3) (Water Rights, 2024a). To reflect the current development of irrigation water rights/permits more accurately, the average annual withdrawal rate for irrigation appropriations from 2013 to 2022 is approximately 5,126 acre-feet per year (Table 3) (Water Rights, 2023a).

Table 3 lists only 49 water rights/permits as reporting in 2022 (Water Rights, 2024a and 2024c). Water Permit No. 8639-3 was approved in April of 2022 and increased the diversion rate authority to irrigate the acres authorized by Water Right No. 4647-3 (Water Rights, 2024c). The acreage authorized by Water Right No. 4647-3 is still limited to a two feet of water per acre per year application rate.

The permit holder for Water Permit No. 8461-3 is noted as withdrawing zero acre-feet during 2022 on the irrigation questionnaire summary (Water Rights, 2024a). A form in the permit file indicates the system was completed June of 2022 with water intended to be put to beneficial use

soon after (Water Rights, 2024c). It is unknown the amount of water that has been put to beneficial use at this time. Overall, Water Permit No. 8461-3 is authorized to irrigate 140 acres. Generally, irrigators in eastern South Dakota apply less than one foot of water per acre per year. However, to account for the fluctuation in wet and dry cycles from year to year, the one foot of water per acre per year application rate will be used to somewhat overestimate the annual withdrawal rate for these irrigation water permits. Therefore, the estimated average annual withdrawal rate for Water Permit No. 8461-3 is approximately 140 acre-feet per year. The average annual withdrawal rate for irrigation appropriations that reported from 2013 to 2022 (5,126 acre-feet/year) plus the estimated use for Water Permit No. 8461-3 (140 acre-feet/year) will be used in this analysis.

There are domestic wells completed into the Upper Vermillion Missouri: North aquifer that do not require a water right/permit, so the withdrawal amount is unknown (Water Rights, 2024d). Due to their relatively low diversion rates, withdrawals from domestic wells are generally not considered to be a significant portion of the average annual withdrawal rate from the Upper Vermillion Missouri: North aquifer. Additionally, there are rural water systems in the area and the Parker-Centerville aquifer overlies portions of the Upper Vermillion Missouri: North aquifer; it is likely some domestic users may have transitioned to rural water or are using the Parker-Centerville aquifer. Therefore, the quantity of water withdrawn by domestic wells is estimated to be negligible to the average annual withdrawal rate for the Upper Vermillion Missouri: North aquifer.

Hydrologic Budget Summary

Using the range for confined aquifers for use by management and development programs from Hedges and others (1985) results in an average annual recharge rate to the Upper Vermillion Missouri: North aquifer of approximately 476 to 1,905 acre-feet per year. There is likely additional recharge (such as, where the aquifer is unconfined and in contact with the overlying Parker Centerville aquifer) that occurs to the aquifer that would not be accounted for by Hedges and others (1985) confined aquifer range. Observation well data show that the generalized recharge rate range estimated Hedges and others (1985) is likely much lower than the actual average annual recharge rate to the Upper Vermillion Missouri: North aquifer (Water Rights, 2024b).

The estimated average annual withdrawal rate from the Upper Vermillion Missouri: North aquifer is approximately 6,386 acre-feet per year (non-irrigation: 784 acre-feet/year; irrigation (avg 2013 to 2022): 5,266 acre-feet/year; Water Permit Application No. 8809-3 (if approved, assuming one-foot application rate per authorized acre): 160 acre-feet/year; pending Water Permit Application No. 8807-3 (if approved, assuming one-foot application rate per authorized acre): 176 acre-feet/year).

Table 3. Reported historic irrigation use from the Upper Vermillion Missouri: North aquifer (Water Rights, 2024a)

Year	No. of Permits Reporting	Reported Pumpage (acre-feet)
1979	24	2,509
1980	24	3,652.5
1981	26	3,349.4
1982	26	2,515.8
1983	27	2,478.7
1984	27	2,320
1985	26	1,982
1986	28	3,066
1987	28	2,896
1988	28	4,956
1989	30	4,331.6
1990	35	5,124.8
1991	35	4,916
1992	37	4,470
1993	36	458.5
1994	34	3,992.7
1995	34	3,965.0
1996	35	3,989.7
1997	34	4,531
1998	36	4,781.1
1999	35	4,209.0
2000	35	5,091.7
2001	35	5,012.7
2002	37	5,837.2
2003	37	5,034.7
2004	37	5,957
2005	38	5,689.3
2006	38	6,535.8
2007	39	5,342.6
2008	42	6,164
2009	42	3,691.4
2010	43	150.5
2011	43	4,286
2012	43	9,321
2013	44	6,973.6
2014	44	4,740.3
2015	44	6,083.0
2016	46	5,807.1
2017	48	5,883.9
2018	48	2,267.6
2019	48	453.2
2020	48	5,215.1
2021	48	5,674
2022	49	8,165
Min	24	150
Max	49	9,321
Avg (1979 to 2022)	37	4,406
Avg (2013 to 2022)	47	5,126

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are 54 water rights/permits authorized to appropriate water from the Upper Vermillion Missouri: North aquifer, plus one pending permit (Water Rights, 2024c). The closest water rights to the proposed diversion point are Water Right Nos. 3829-3 and 6746-3, which are held by Gary R Knock and Jarrod Hagen a respectively. The diversion points for Water Right Nos. 3829-3 and 6746-3 are located approximately one mile southwest of the proposed diversion point for this application (Table 4) (Figure 21) (Water Rights, 2024c).

There are domestic wells on file with the DNR-Water Rights Program that are completed into the Upper Vermillion Missouri: North aquifer, with the closest domestic well on file (not held by the applicant) located approximately 0.6 miles northeast of the proposed diversion point (Water Rights, 2024d). There could potentially be other domestic wells completed into the Upper Vermillion Missouri: North aquifer near the proposed diversion point that are not on file with the DNR-Water Rights Program. The location of the domestic wells in the well completion report database maintained by the Water Rights Program is based on the location listed by the driller on the well completion report.

Table 4. Water rights/permits authorized to withdraw water from the Upper Vermillion Missouri: North aquifer within approximately three miles of the proposed diversion point, as shown in Figure 21 (Water Rights, 2024c)

Permit No.	Name	Status	Use	Authorized Acres if IRR	Authorized Diversion Rate (cfs)	Annual Volume (acre-feet/year)
1930-3	Mary G Madsen	LC	IRR	132	2	
1930-3A	Larohn Hagen a	LC	IRR	132	1.56	
3156-3	Glenn is M Tellinghuisen	LC	IRR	132	1.88	
3158-3	Sheryl Fast	LC	IRR	35	0.5	
3410-3	Horner Family LTD Partnership	LC	IRR	112	1.6	
3541-3	Pine Knoll Mobile Home Park	LC	IRR	228	3	
3735-3	Happy Acres LLC	LC	IRR	132	1.88	
3784-3	Larohn Hagen a	LC	IRR	132	1.88	
3829-3	Gary R Knock	LC	IRR	90	1.29	
3833-3	Larohn & Dianne Hagen a	LC	IRR	128	1.83	
3901-3	Roger R Ihnen	LC	IRR	311	4.23	
3902-3	Roger R Ihnen	LC	IRR	156	2	
3926-3	Brian D Smit	LC	IRR	132	1.88	
5259-3	Gary R Knock	LC	IRR	132	1.88	
5413-3	Lee Schriever	LC	IRR	134	1.4	
6335-3	Joe Hummel	LC	IRR	231	1.78	
6435-3	South Lincoln RWS	LC	RWS		2.45	900
6561-3	David Smit	PE	IRR	136	2	
6746-3	Jarrod Hagen a	LC	IRR	158	2.23	
6727-3	South Lincoln RWS	LC	RWS		1.95	900
6868-3	Joe Hummel	PE	IRR	0	1.78	
7468-3	Cleland Hagen Trust	PE	IRR	152	1.78	
8461-3	Jerome Hult	PE	IRR	140	1.78	
8807-3	Daric D Bossman Limited Partnership	pending	IRR	176	1.78	

LC: Licensed Water Right; PE: Water Permit; IRR: Irrigation; RWS: Rural Water System

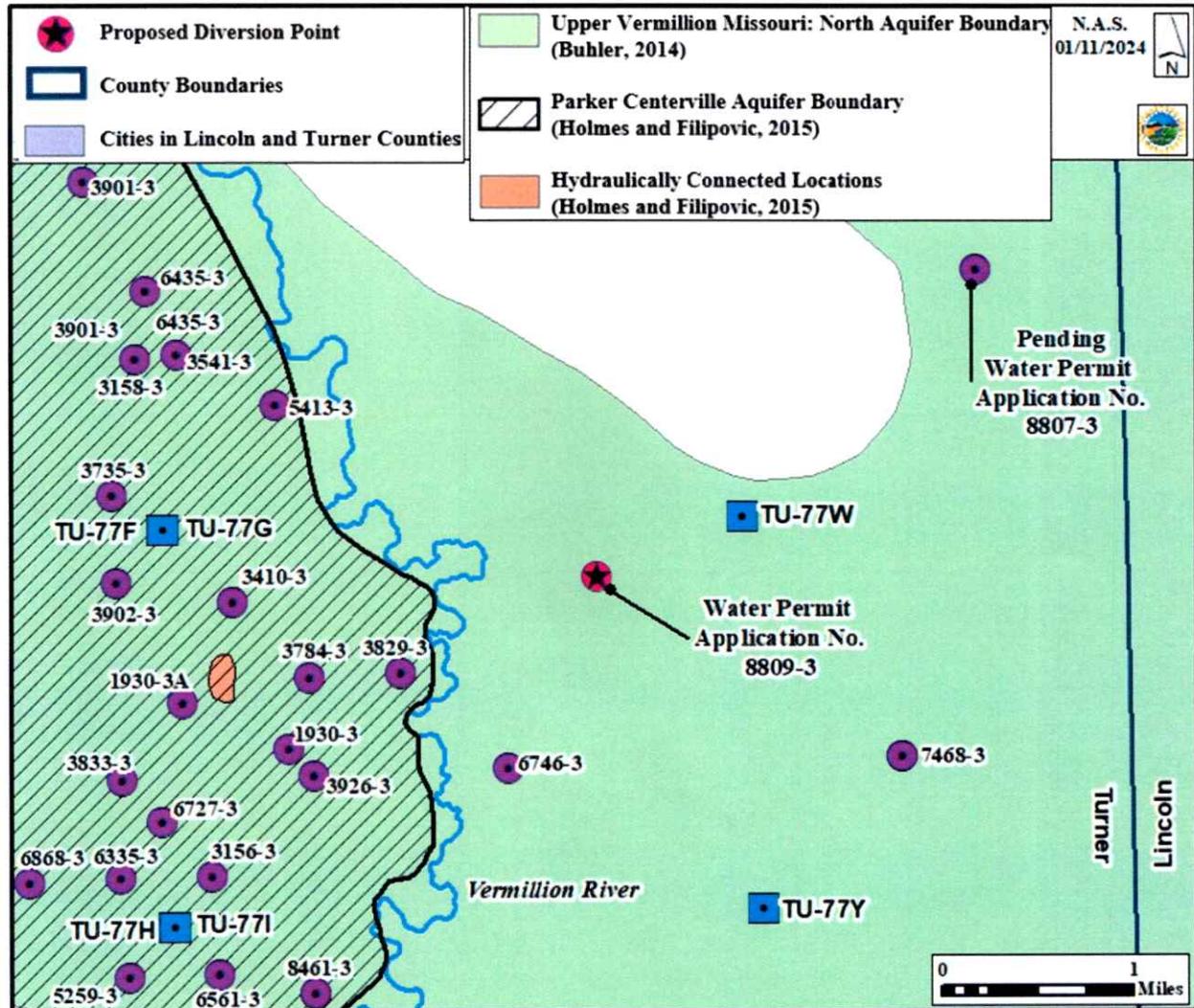


Figure 21. Map of the approximate UVM: N aquifer boundary (modified from Buhler, 2014), the approximate Parker-Centerville aquifer boundary (modified from Holmes and Filipovic, 2015), the hydraulically connected areas between the two aquifers (modified from Holmes and Filipovic, 2015), the location of the proposed diversion point, and the UVM: N aquifer water rights/permits and observation wells within approximately three miles, including the pending water permit application (Water Rights, 2024b and 2024c)

The Upper Vermillion Missouri: North aquifer is generally buried and confined but can be locally unconfined in locations where the Parker-Centerville aquifer directly overlies it (Figure 1) (Holmes and Filipovic, 2015). The Upper Vermillion Missouri: North aquifer is expected to be confined near the proposed diversion point, based on well completion reports for nearby water rights/permits, and lithologic logs on file for nearby observation wells (SDGS, 2024; Water Rights, 2024b and 2024d). The drawdown created by pumping a well generally does not extend far from the pumped well in an unconfined aquifer; however, in a confined aquifer, drawdown from pumping could extend a distance from the diversion point. The exact drawdown behavior of a well cannot be known without an aquifer performance test. However, observation wells completed into the Upper Vermillion Missouri: North aquifer near permitted/licensed diversion points can provide some insight on how the aquifer responds to pumping.

Observation well TU-77W (approximately 0.8 miles northeast of the proposed diversion point) has three high-yield (assumed to be a well with an authorized diversion rate greater than 0.2 cfs) irrigation wells within approximately two miles of it (Water Rights, 2024b and 2024c). The drawdown from pumping can be seen on the hydrograph for TU-77W, along with the aquifer returning to pre-pumping conditions between irrigation seasons (Figure 9) (Water Rights, 2024b). The lithologic log on file for TU-77W noted the well was drilled 160 feet deep below the ground surface, had a casing stick up height of approximately 2.5 feet, and the top of aquifer materials approximately 144 feet below the ground surface (SDGS, 2024). The lowest recorded static water level on the hydrograph (displayed in Figure 9) is approximately 71 feet below the top of the well casing, which indicates there was still approximately 75 feet of artesian head pressure in TU-77W even during drier periods when high-yield wells are expected to be pumping more water and when water levels are generally naturally lower in response to drier conditions (SDGS, 2024; Water Rights, 2024b).

Well completion reports on file with the DANR-Water Rights Program for wells completed into the Upper Vermillion Missouri: North aquifer within approximately two miles of the proposed diversion point have a saturated aquifer thickness ranging from approximately 10 to 100 feet (SDGS, 2024; Water Rights, 2024d). The lithologic log on file for observation well TU-77W, approximately 0.8 miles northeast of the proposed diversion point, has a saturated aquifer thickness of approximately 10 feet (SDGS, 2024; Water Rights, 2024b). This would not allow for enough thickness for a pump to be placed 20 feet below the top of the aquifer materials. To be considered an adequate well at this location, the inlet of the pump would need to be placed as near as practical to the bottom of the saturated aquifer to qualify as an adequate well under ARSD 74:02:04:20(6). Therefore, the applicant should control their withdrawals so that nearby adequate domestic wells and senior water rights/permits are able to access needed water. In Turner County, there are no complaints on file with the DANR-Water Rights Program regarding well interference for adequate wells completed into the Upper Vermillion Missouri: North aquifer (Water Rights, 2024e).

The Water Management Board recognizes that putting water to beneficial use requires a certain amount of drawdown to occur. The Board has developed rules to allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

“A well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner’s needs.”

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use during the issuance of Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Board adopted the Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, “general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable...” (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered as an unlawful impairment, it would also conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to install or lower pumps depending on the specific characteristics of the Upper Vermillion Missouri: North aquifer at their location. However, when considering the statutes (SDCL 46-1-4 and 46-6-6.1), rules (ARSD 74:02:04:20(6) and (7)), the artesian head pressure in observation wells and appropriative user’s wells completed into the aquifer near the proposed diversion point, and the lack of well interference complaints for adequate wells completed into the aquifer in Turner County, any drawdown created from the proposed diversion is not expected to cause an unlawful impairment on existing water right/permit holders or domestic users with adequate wells. Therefore, there is a reasonable probability that any interference from the proposed appropriation will not impose unlawful impairments on existing users with adequate wells.

CONCLUSIONS:

1. Water Permit Application No. 8809-3 proposes to divert water at a maximum instantaneous diversion rate of 1.78 cfs from one well to be completed into the Upper Vermillion Missouri: North aquifer (approximately 150 feet deep) for the irrigation of 160 acres. The site of interest is located approximately five miles southwest of Lennox, SD in Turner County.
2. Based on the observation well data, there is a reasonable probability that unappropriated water is available from the Upper Vermillion Missouri: North aquifer to supply the proposed appropriation.
3. There is a reasonable probability that the proposed diversion by Water Permit Application No. 8809-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic users.
4. If this application is approved, a qualification requiring the applicant to control their water withdrawals, so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights, should be included.

Nakaila Steen

Nakaila Steen
Natural Resources Engineer II
SD DANR - Water Rights Program

Reviewed by:

Adam Mathiowetz

Adam Mathiowetz, PE
Natural Resources Engineer IV
SD DANR - Water Rights Program

References

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- Water Rights, 2024d. Well Completion Reports, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
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**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

**NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPERS RIGHT AWAY.**

February 1, 2024

Darbi D. Bossman Limited Partnership
4224 Boca Pointe Drive
Sarasota FL34238

Dear Mr. Bossman:

Water Permit Application No. 8809-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the New Era printed in Parker SD (Ph # 605 297-4419) and the Argus Leader printed in Sioux Falls SD (see attachment for contact number). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspapers to authorize publication of your Notice and to arrange for payment. Early contact with the papers can eliminate delays. Upon receiving authorization from you, the publishers have been instructed to publish your notice. The newspapers have also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Rachel Rodriguez

Rachel Rodriguez
Water Rights Program
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

NOTICE OF APPLICATION NO. 8809-3 to Appropriate Water

Notice is given that Darbi D. Bossman Limited Partnership, 4224 Boca Pointe Drive, Sarasota FL 34238 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from one well to be completed into the Upper Vermillion Missouri: North Aquifer (approximately 150 feet deep) located in the center of the NW 1/4 Section 22 for irrigation of 160 acres located in the NW 1/4 Section 22; all in T98N-R52W. This site is located approximately 5 miles southwest of Lennox SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8809-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by February 20, 2024.

The petition shall include a statement describing the unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by February 20, 2024.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at the total approximate cost of _

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Wednesday, January 31, 2024 8:45 AM
To: New Era
Subject: 8809-3 Darbi D. Bossman Limited Partnership - Public Notice
Attachments: 8809-3 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on February 8, 2024.

Darbi D. Bossman Limited Partnership, 4224 Boca Pointe Drive, Sarasota FL 34238, 605-351-6026 has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol Ave, Pierre SD 57501.

Let me know if you have questions. **Please acknowledge receipt of this email.**

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Wednesday, January 31, 2024 8:46 AM
To: legals@argusleader.com
Subject: 8809-3 Darbi D. Bossman Limited Partnership - Public Notice
Attachments: 8809-3 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on February 8, 2024.

Darbi D. Bossman Limited Partnership, 4224 Boca Pointe Drive, Sarasota FL 34238, 605-351-6026, pbpfarms@gmail.com has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol Ave, Pierre SD 57501.

Let me know if you have questions. **Please acknowledge receipt of this email.**

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



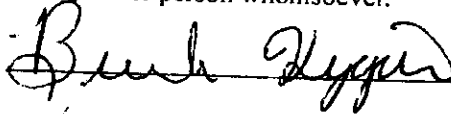
Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF TURNER

I, Brenda Kiggins of New Century Press, publisher of The New Era, which is a weekly newspaper of general circulation, Printed and published in the City of Parker, in said County of Turner., and has been such legal newspaper during the times here in after mentioned; that the said newspaper has been in existence as such legal newspaper for more than one year prior to the publication of the notice here unto attached, and has during all of said publication of the notice hereunto attached, and has during all of said time had, and now has, more than 200 bona fide subscribers; that the undersigned, the affiant, is the Office Assistant of the said newspaper, in charge of the advertisement department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed:
N0208-1 Notice of Application No. 5809-3 to Appropriate Water
Once printed copy of hereto attached, is printed and published in the said newspaper for one week, to wit:

On Thursday, the 8th day of February 2024

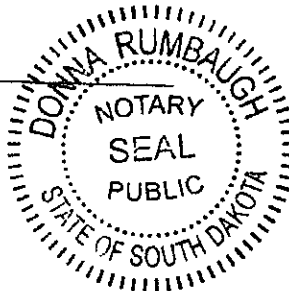
That \$33.60 being the full amount of the fees for publication of the attached notices insure solely for the benefits of the publishers of the said newspaper, that no arrangement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid To any other person whomsoever.

_____

Subscribed and sworn to before me this 9th day of February 2024

_____

Notary Public, State of South Dakota
My Commission Expires August 11, 2029



Publication Fee...\$33.60
Notary Fee...\$
Total ...\$33.60

**NOTICE OF APPLICATION NO.
8809-3 to Appropriate Water**

Notice is given that Darbi D. Bossman Limited Partnership, 4224 Boca Pointe Drive, Sarasota FL 34238 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from one well to be completed into the Upper Vermillion Missouri North Aquifer (approximately 150 feet deep) located in the center of the NW 1/4 Section 22 for Irrigation of 160 acres located in the NW 1/4 Section 22; all in T98N-R52W. This site is located approximately 5 miles southwest of Lennox SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8809-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duval for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written

petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by February 20, 2024.

The petition shall include a statement describing the unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by February 20, 2024.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at the total approximate cost of \$33.60 and may be viewed free of charge at www.sdpublicnotices.com.



South Dakota
GANNETT

PO Box 630567 Cincinnati, OH 45263-0567

PROOF OF PUBLICATION

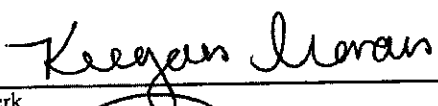
Daric Bossman
Daric D Bossman Limited Partnership
45610 282Nd ST
Hurley SD 57036-6009

STATE OF WISCONSIN, COUNTY OF BROWN

The Argus Leader, a daily newspaper published in the city of Sioux Falls, Minnehaha County, State of South Dakota, and personal knowledge of the facts herein state and that the notice hereto annexed was Published in said newspapers in the issue:

02/08/2024

and that the fees charged are legal.
Sworn to and subscribed before on 02/08/2024



Legal Clerk



Notary, State of WI, County of Brown

My commission expires

Publication Cost: \$55.53

Order No: 9806579

of Copies:

Customer No: 1345491

1

PO #:

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

RYAN SPELLER
Notary Public
State of Wisconsin

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APPLICATION NO. 8809-3
to Appropriate Water**

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Published February 8, 2024 at the total approximate cost of \$55.53 and may be viewed free of charge at www.sdpublicnotices.com.

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Thursday, February 1, 2024 9:54 AM
To: PBP Farms
Subject: 8809-3 Darbi D. Bossman Limited Partnership - Public Notice
Attachments: 8809-3 Rec.pdf; 8809-3 Ltr.pdf; 8809-3 PubNotice.pdf; 8809-3 ArgusLeaderInfo.pdf

Good morning,

Attached is a copy of the report, chief engineer's recommendation, and information regarding the public notice for your water permit application. As stated in the letter, **please contact the paper(s) as soon as possible to authorize publication and arrange for payment.** This information is also being mailed to you today.

Let me know if you have questions. Please acknowledge receipt of this email.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

MAR 08 2024

Darbi D. Bossman Limited Partnership
c/o Darbi D. Bossman
4224 Boca Pointe Drive
Sarasota FL 34238

Dear Mr. Bossman:

Enclosed is Water Permit No. 8809-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

**Affidavit of Public Notice
Posting on DANR Website**

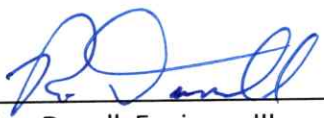
Pursuant to SDCL § 46-2A-4, public notice of the following application was posted on the DANR web site at <https://danr.sd.gov/public>. The posted public notice is the same notice as published in the pertinent newspaper(s) and a copy of the public notice is maintained in the application file. If the application is contested, the posting is moved to the DANR contested case website at <https://danr.sd.gov/public/ContestedCase.aspx> until final action is taken on the application pursuant to SDCL § 46-2A-4.

Application No.: 8809-3

Name of Applicant: Darbi D. Bossman Limited Partnership, c/o Darbi Bossman

Date of Posting: 2/6/2024

Date of Removal: 3/8/2024



Ron Duvall, Engineer III

3/8/2024

Date

Subscribed and sworn to before me, a notary public, this 8th day of March, 2024.



Notary Public - South Dakota **Rachel Rodriguez**
My commission expires: **My Commission Expires**
May 16, 2029



(SEAL)

11-02

Well Owner: BRETT PETERSEN

North

A 3x3 grid with a blue 'X' in the top-left cell. The grid is labeled 'W' on the left and 'E' on the right.

JUNE 2024

A scale bar consisting of a horizontal line with arrows at both ends. The text "1 Mile" is centered above the line.

PROPOSED USE:

☐	Domestic/Stock	☐	Municipal	☐	Business	☐	Test holes
☒	Irrigation	☐	Industrial	☐	Institutional	☐	Monitoring well

MUD ROTARY

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12 IN	0 FT	150 FT	18.75 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

Grout Type	No. of Sacks	Grout Weight	From	To
<u>BENTONITE</u>	<u>42</u>	Lb/gal	<u>0</u> Ft	<u>145</u> Ft
		Lb/gal	Ft	Ft

TREMIE PIPED

Diameter 12 Inches Length 20 Feet
Material STAINLESS STEEL
Slot Size .060 Set From 150 Feet to 170 Feet
Other information 12" 40' PVC .050 SLOT
SET FROM 170 TO 210

Describe packer(s) and location

Lab to which water quality sample sent for analysis

IRRIGATION WELL

City, State, Zip: **HURLEY** **SD** **57036**

DEPTH

FORMATION	FROM	TO
SEE ATTACHED LOG	0	210

30 FEET

If flowing: closed in pressure _____ PSI
GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate	GPM
100	100
90	90
80	80
70	70
60	60
50	50
40	40
30	30
20	20
10	10
5	5
2	2
1	1

Can well be completely shut in?

☐ Pumped Describe: AIRLIFTED☐ Bailed☒ Other

Pumping Level Below Land Surface

51 Ft. After 5.5 Hrs. pumped 800 GPM

	Ft. After	Hrs. pumped	GPM
1			
2			
3			
4			
5			
6			
7			
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99			
100			

If pump installed, pump rate: _____ GPM

GPS TH # 2 N 43° 17.8450 W 96° 59.0240

12 " IRRIGATION WELL

This well was drilled under license # 475 and this report is true and accurate.

Drilling firm: **THEIN WELL COMPANY, INCORPORATED**

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

RECEIVED

OCT 21 2024

OFFICE OF
WATER

BRETT PETERSEN 12" WELL SEC 22 DAVIS SD

Legend



282nd St

282nd St

461st Ave

RECEIVED

OCT 21 2024

OFFICE OF
WATER

Brett Petersen TH # 1 233' 1/25/2024

Brett Petersen TH # 2 220' 1/26/2024 210' 12" IRRIGATION WELL JUNE 2024

N 43 17.8450 W 96 59.0240

41

Google Earth

1000 ft



Brett Petersen - Formation Log for 12 " Well Sec22 Davis SD

<i>Formation</i>	<i>From</i>	<i>To</i>
Top soil	0	3
Tan clay	3	16
White clay	16	19
Tan clay	19	25
Pebbly tan clay	25	28
Pebbly blue clay	28	51
blue clay w gravel layer	51	65
sandy blue clay	65	78
Gravel	78	81
Gravel consolidated	81	96
blue clay	96	105
Blue clay w/ sandy layers	105	136
Gravel w/ clay layer	136	156
Clean gravel	156	209
Shale	209	220

RECEIVED

OCT 21 2024

OFFICE OF
WATER