

WATER PERMIT NO. 8540-3

Name of Applicant: **JD Bieber Enterprises Inc.**

Address: **PO Box 340, Bowdle SD 57428** Phone: **605 281-1605**

Amount of Water Claimed: **no add'l** Total Acres: **70 acres**

Source of Water Supply: **groundwater (2 existing wells)**

Water to be used for: **irrigation** County: **McPherson**

Type of Waste Disposal System:

Location: **approximately 6 miles southwest of Eureka**

PRIORITY Date Received: **8-11-21** Application/License Fee: **\$ 950**

Corrected Application Received: Period of Annual Use: **April 1 – October 31**

Remarks: **Utilizing existing wells authorized by Water Permit No. 8405-3**

Diversion Point: **SE 1/4 Sec 29-T126N-R73W**

Land to be Irrigated: **N 1/2 NE 1/4 Sec 32-T126N-**
R73W

Depth of Well: **209 feet deep**

Well Driller:

Remarks:

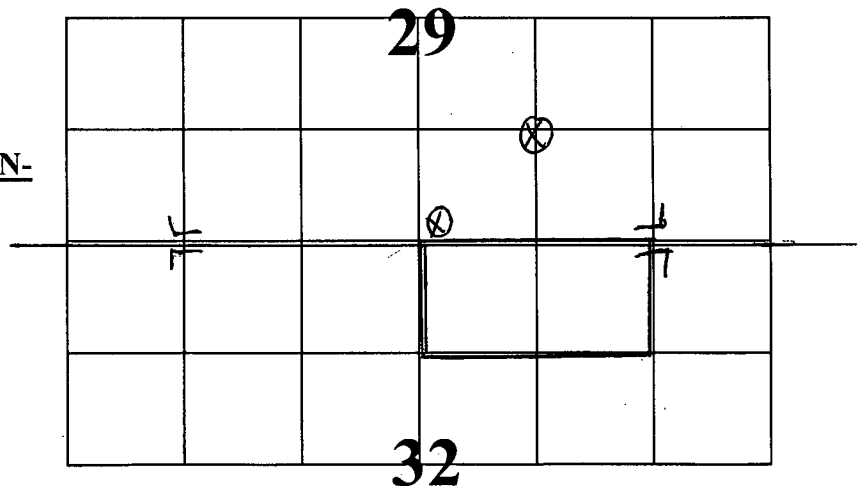
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **8-11-21**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



**SOUTH DAKOTA
WATER PERMIT NO. 8540-3**

Date of first receipt of application August 11, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8540-3 to JD Bieber Enterprises Inc., c/o Sarah Bieber, PO Box 340, Bowdle SD 57428 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. 8540-3 irrigates 70 additional acres. Water Permit No. 8405-3 authorizes 1.78 cubic feet of water (cfs) from two wells completed into the Grand Aquifer (209 feet deep) located in the approximate center of the SE 1/4 and the SW 1/4 SE 1/4 Section 29 for irrigation of 136 acres located in the SE 1/4 Section 29; all in T126N-R73W. This permit authorizes irrigation of an additional 70 acres located in the N 1/2 NE 1/4 Section 32-T126N-R73W from the existing wells. This permit and Water Permit No. 8405-3 will authorize a total of 1.78 cfs for irrigation of 206 acres. This site is located approximately 6 miles southwest of Eureka 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: April 1 – October 31.
3. The date from which applicant may claim right is August 11, 2021.
4. The date of approval of Permit No. 8540-3 is October 25, 2021.
5. One-fifth of the construction is to be completed on or before April 25, 2024.
6. All construction is to be completed on or before October 25, 2026.
7. Water is to be put to beneficial use on or before October 25, 2030.
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 wells approved under Water Permit Nos. 8405-3 and this Permit are 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. 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

NOV 30 2021
date



FORM 2: Application for irrigation in South Dakota

(type or print)

RECEIVED

AUG 11 2021

PAID

AUG 11 2021

Ck# 3546

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8540-3</u>	(office use only) Hydrologic Unit <u>10130106</u>	WATER RIGHTS PROGRAM
	Basin <u>Missouri River</u>		
	Newspaper <u>Northwest Blade</u>		
	<u>American News</u>		

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☐ New ☐ Vested Right ☒ Amendment/Correction to Permit No. 8405-3
(Use predates Mar 2, 1955)

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

to add an additional 70 acres to existing well1. Name to Appear on Irrigation Permit JD Bieber Enterprises, Inc.

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

Mailing Address PO Box 340 (Address) Bowdle (City) SD (State) 57428 (Zip Code)

Phone _____ Mobile 605-281-1605 Email bieberjustin@yahoo.com
(no additional)

2. Amount of water claimed _____ *CFS or 800 **GPM ***AF Total Acreage 70
(*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

4. Location of point of diversion 2 wells already located in SE1/4 - Section 29 - T126N - R73W
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
County McPherson

5. County or counties where water will be used McPherson6. Annual period during which water is to be used April through October

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	Land Description	Acres
North 80 of NE1/4 - Section 32 - T126N - R73W (N1/2 NE1/4)	70		

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

Pivot Irrigation addition to existing well - The 2 South corners will not be irrigated but will be farmed.

I, Sarah Bieber President, 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.

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 _____ Have test holes been drilled ☐ Yes ☐ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many 2 Provide copy of log(s), if available. Drilled by Mani Kowski Well Drilling Inc.

For either Existing or Proposed Wells:

c) Well Depth (required) 209 ft Depth to Top of Water Bearing Material 190 ft Depth to Water from Surface 25 ft

d) Distance to nearest domestic well on applicant's property NONE Property owned by others over a mile

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) N/A

b) System Capacity (gallons) N/A Year Constructed N/A

c) Connected to the City of N/A Sanitary System

3. Dugout Information

a) Surface Dimensions N/A Depth N/A

b) Depth to water (ground surface to water level) N/A

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 N/A

e) Primary Outlet Capacity N/A

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

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

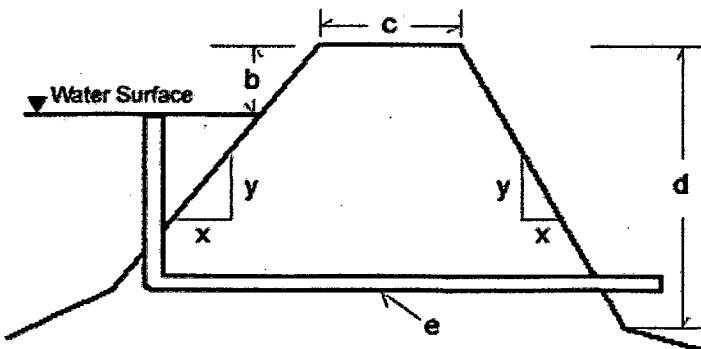
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

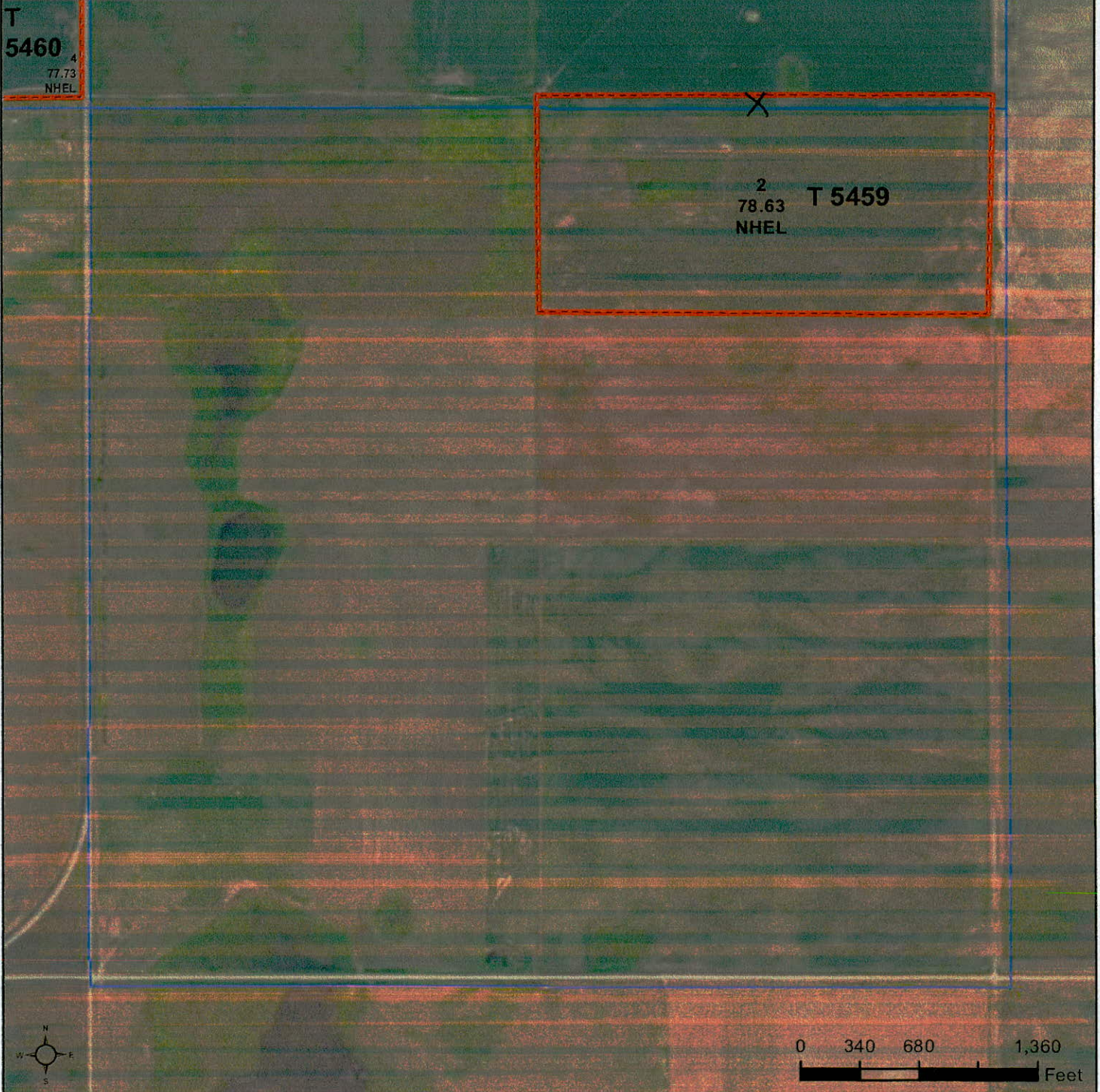
j) Drainage Area Above Dam _____ Acres





United States
Department of
Agriculture

McPherson County, South Dakota



Common Land Unit PLSS

- Cropland
- Tract Boundary

Wetland Determination Identifiers

- Restricted Use
- ▼ Limited Restrictions
- Exempt from Conservation
- Compliance Provisions

2021 Program Year

Map Created February 25, 2021

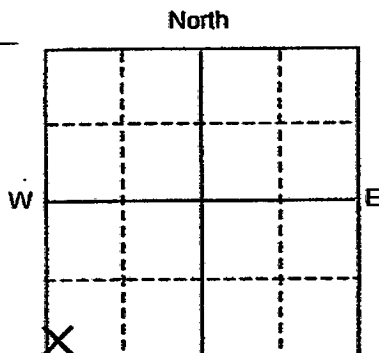
Farm 5561

32-126N-73W

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 SW 1/4 Sec 29 Twp 126N Rg 73WCounty McPhersonPlease mark well
location with an "X"

Well Completion Date

7-03-19

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
ft. from none nearby (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Forward Rotary

CASING DATA: ☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>11-21</u> LB/FT	<u>5</u> IN	<u>+1</u> FT	<u>190</u> FT	<u>8.75</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>montone</u>	<u>15</u>	<u>9.7</u> Lb/gal	<u>0</u> Ft	<u>190</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Grout placed thru 1" tremie

SCREEN: ☐ Perforated pipe ☒ Manufactured

Diameter 5 inches Length 20 Feet

Material PVC

Slot Size .050 Set From 190 Feet to 210 Feet

Other information

WAS A PACKER OR SEAL USED? ☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes. How? 500 gal. 100ppm chlorine solution☒ No. Why Not? irrigationLab to which water
quality sample sent for analysis test wellWell Owner: Justin BieberBusiness Name: JD Bieber Enterprises Inc.Address: P.O. Box 340City, State, Zip: Bowdle SD 57428

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Topsoil	0	1
Yellow Clay	1	25
Blue Clay	25	154
Gravel	154	156
Blue Clay	156	190
Coarse Sand to Gravel	190	209
Shale	209	240

STATIC WATER LEVEL 25 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: pumped with submersible☐ Bailed☐ Other

Pumping Level Below Land Surface

55.2 Ft. After 42 Hrs. pumped 100 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

Stabilized at 3.3 Gal/ ft

This well was drilled under license # 251 and this
report is true and accurate.Drilling firm: Manikowsk Well Drilling Inc.

Signature of License Representative:

By Rod Manikowsk

Signature of Well Owner or Equitable Property Holder:

Date: 7-14-19

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

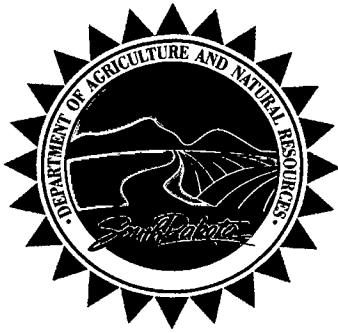
Date August 11, 2021

RECEIVED OF JD Bieber Enterprises Inc. PO Box 340 Bowdle SD 57428

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

Fee for Application for Permit No. 8405-3 <u>8540-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>750.00</u>
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>8540-3</u>	\$ <u>200.00</u>
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	\$ <u>950.00</u>

By Eric Gronlund
Chief Engineer
DM



**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. 8540-3, JD Bieber Enterprises, Inc.**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8540-3, JD Bieber Enterprises, Inc., PO Box 340, Bowdle SD 57428.

The Chief Engineer is recommending APPROVAL of Application No. 8540-3 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 wells approved under Water Permit Nos. 8405-3 and this Permit are 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. 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
September 27, 2021

Report to the Chief Engineer
On Water Permit Application Nos. 8539-3 and 8540-3

JD Bieber Enterprises, Inc.

c/o Sarah Bieber

September 20, 2021

Water Permit Application No. 8539-3 proposes to appropriate water at a maximum instantaneous diversion rate of 1.78 cubic feet per second (cfs) from one well to be completed into the Grand aquifer (approximately 210 feet deep) in the N $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 30 for the irrigation 120 acres located in the S $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 30; all in T126N-R73W. The applicant is requesting a diversion rate greater than the statutory limit of 1.0 cfs per 70 acres. The site is in McPherson County approximately six miles southwest of Eureka, South Dakota.

The applicant holds Water Permit No. 8405-3 which authorizes a maximum instantaneous diversion rate of 1.78 cfs from two wells completed into the Grand aquifer (209 feet deep) in the approximate center of the SE $\frac{1}{4}$ and the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 29 for the irrigation of 136 acres located in the SE $\frac{1}{4}$ of Section 29; all in T126N-R73W.

Water Permit Application No. 8540-3 proposes to irrigate 70 acres located in the N $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 32-T126N-R73W from the two existing wells authorized under Water Permit No. 8405-3. If approved, Water Permit Application No. 8540-3 and Water Permit No. 8405-3 will collectively authorize a maximum instantaneous diversion rate of 1.78 cfs for the irrigation of 206 acres.

AQUIFER: Grand (G)

HYDROGEOLOGY:

The Grand aquifer is a deep, glacial aquifer that lies in a bedrock valley eroded by the ancient, pre-glacial Grand River (Christensen, 1977; Hamilton, 1982; Koch, 1970). The aquifer was deposited by glacial meltwater and is composed of sorted and stratified sand, gravel and silt layers, that can contain thin beds of silty clay (Hamilton, 1982; Koch, 1970). The Grand aquifer abruptly increases in thickness from its margins to the deepest part of the bedrock channel in which it lies, with the greatest thicknesses occurring in the deepest areas of the bedrock channels (Hamilton, 1982). In the southwestern portion of McPherson County, the deepest area of the bedrock channel in which the aquifer lies is where a documented maximum thickness of 175 feet for the Grand aquifer has been measured (Hamilton, 1982). Water in the Grand aquifer moves from groundwater divides (and recharge areas) toward major discharge areas; such as, towards southeastern Faulk County, towards northeastern Faulk and southeastern Edmunds Counties, and along the Missouri River (Koch, 1970; Hamilton, 1982). The Grand aquifer is primarily under artesian (confined) conditions (Koch, 1970; Hamilton, 1982).

Hedges and others (1982) estimated the areal extent and amount of recoverable water stored in the Grand aquifer (Table 1). Those approximations were based on the best available information at that time. Figure 1 displays the delineation of the Grand aquifer based on the study completed by Hedges and others (1982).

Table 1. Areal extent and amount of recoverable water stored in the Grand aquifer based on the delineation estimated by Hedges and others (1982)

	Campbell	Edmunds	Faulk	Hand	McPherson	Walworth	Total:
Areal Extent (acres)	97,900	112,000	74,200	9,600	44,200	67,200	405,100
Recoverable Water in Storage (acre-feet)	1,469,000	840,000	556,000	48,000	331,000	393,000	3,637,000

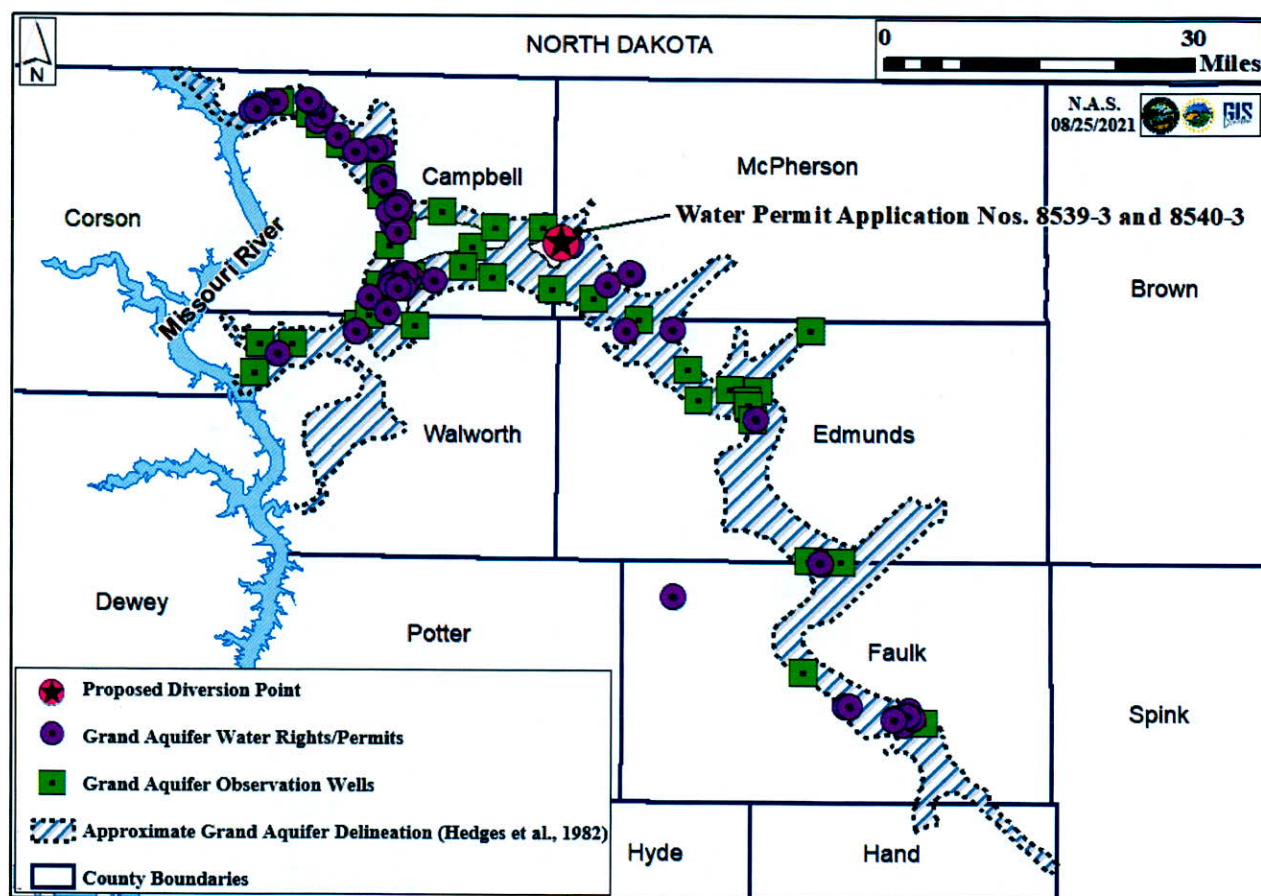


Figure 1. Map of the approximate Grand aquifer boundary delineated by Hedges and others (1982) with the location of the proposed diversion point for Water Permit Application No. 8539-3 and the existing wells for Water Permit Application No. 8540-3, and the water rights/permits and observation wells within the Grand aquifer (Water Rights, 2021a and 2021b)

In McPherson County, Hamilton (1982) estimated the Grand aquifer to underlie approximately 44,800 acres and contain approximately 500,000 acre-feet of recoverable water in storage. It is worth noting the areal extent and recoverable water approximations estimated by Hamilton (1982) is greater than the extent and volume estimated by Hedges and others (1982) for the Grand aquifer in McPherson County. It is likely the actual areal extent and volume of recoverable water stored in the Grand aquifer ranges between the estimates calculated by Hedges and others (1982) and Hamilton (1982). To be conservative, the areal extent and volume of recoverable water in storage estimated by Hedges and others (1982) will be used in this analysis.

More recently, the South Dakota Geological Survey (SDGS) completed additional drilling in Edmunds, Faulk and Hand Counties to aid in developing first occurrence of aquifer materials maps (finalized by Tom Rich) for these counties. A first occurrence of aquifer materials map typically does not identify individual glacial aquifers, but it does provide a map with a range of depths to geologic materials of a mappable extent that have the potential to produce water. In the case of the First Occurrence of Aquifer Materials Map for Edmunds County, some of the mapped aquifer materials included notations on which aquifer's extent they contributed to (Rich, 2010). Since multiple aquifers that are separated by confining layers can be present vertically at a single location, first occurrence maps only yield information that can potentially contribute to refining aquifer delineation for the upper most aquifer in the sequence. Therefore, depending on location first occurrence maps typically do not offer much understanding into the extent of basal aquifers (glacial aquifers directly overlying bedrock). However, in Edmunds and Faulk Counties, the Grand aquifer (where present) is generally the uppermost mappable aquifer material so the first occurrence of aquifer materials maps for these counties can be used to determine the areal extent of the materials that compose the Grand aquifer (Hedges et al., 1982; Rich, 2008; Rich, 2010; Rich, 2013).

After reviewing observation well data and the first occurrence of aquifer materials mapped by Tom Rich (Rich, 2008, 2010, and 2013), there appears to be three separate portions of the Grand aquifer that are not hydrologically connected in the same locations mapped by Hedges and others (1982). Figure 2 displays the delineation of the Grand aquifer based on the Hedges and others (1982) study with modifications based on the First Occurrence of Aquifer Materials Maps for Edmunds, Faulk, and Hand Counties (Hedges et al., 1982; Rich, 2008; Rich, 2010; Rich, 2013).

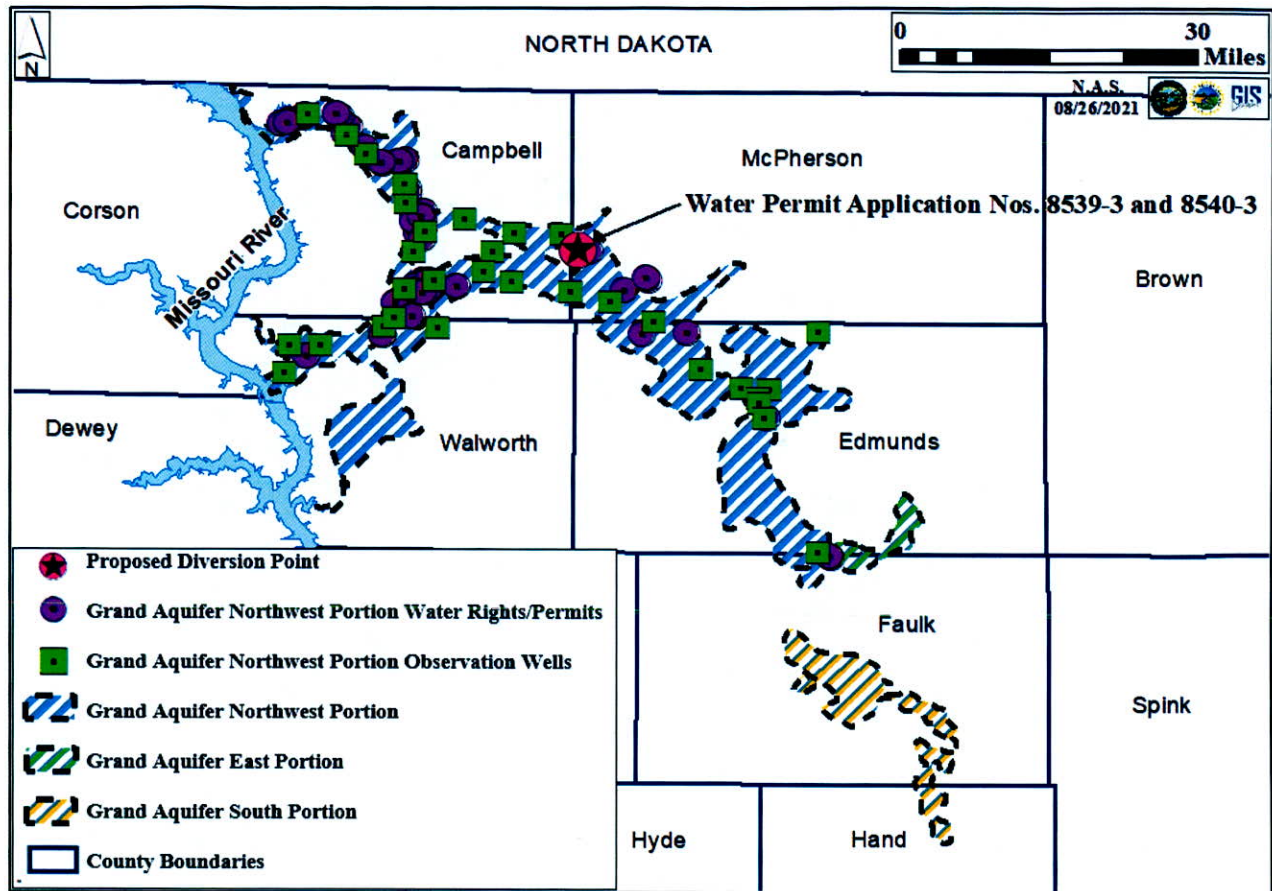


Figure 2. Map of the approximate Grand aquifer boundary (modified from: Hedges et al., 1982; Rich, 2008; Rich, 2010; Rich, 2013; Kilts, 2019), with the location of the proposed diversion point for Water Permit Application No. 8539-3 and existing wells for Water Permit Application No. 8540-3, and the water rights/permits and observation wells within the northwestern portion of the Grand aquifer (Water Rights, 2021a and 2021b)

For Campbell, Walworth, and McPherson Counties, the areal extent for the northwestern portion of the Grand aquifer was determined by utilizing the delineation based on Hedges and others (1982) (Table 2). Hedges and others (1982) estimated areal extent for those counties is the best information currently available since substantial drilling has not been completed. Additionally, the SDGS “Current Projects – Aquifer Delineation” webpage for the First Occurrence of Aquifer Materials mapping work lists additional work in Campbell and McPherson Counties as “In Progress,” and as “Planned” for Walworth County (SDGS, 2021a). The drilling and studies needed to produce these maps are multi-year projects. In these counties, there is a greater presence of shallow aquifers overlying the Grand aquifer; therefore, those shallow aquifers would be mapped as the first occurrence of aquifer material rather than the Grand aquifer. It is likely it will be several years until enough data is available to further refine the extent of the Grand aquifer boundary in Campbell, Walworth, and McPherson Counties.

For Edmunds and Faulk Counties, the areal extent for the northwestern portion of the Grand aquifer was determined by utilizing the First Occurrence of Aquifer Materials Maps completed by Rich (2008 and 2010) (Table 2). Overall, the estimated area for the northwestern portion of the Grand aquifer (as displayed in Figure 2) is 360,621 acres (Hedges et al., 1982; Rich, 2008; Rich, 2010; Kilts, 2019)

Table 2. Estimated area of the northwestern portion of the Grand aquifer as displayed in Figure 2 (Hedges et al., 1982; Rich, 2008; Rich, 2010; Kilts, 2019)

County	Acres	Source
Campbell	97,900	Hedges et al., (1982) - report text
McPherson	44,200	Hedges et al., (1982) - report text
Walworth	67,200	Hedges et al., (1982) - report text
Edmunds	144,039	estimated from Rich (2010)
Faulk	7,282	estimated from Rich (2008)
Total	360,621	

The proposed diversion point for Water Permit Application No. 8539-3 and the existing wells proposed to be used for Water Permit Application No. 8540-3 are located in the northwestern portion of the Grand aquifer. For the remainder of this report, the terms “aquifer” or “Grand aquifer” will be referring to the northwestern portion of the Grand aquifer as shown in Figure 2.

No water well or test hole completion report was submitted with Water Permit Application No. 8539-3; however, a test well completion report was submitted with Water Permit Application No. 8540-3 for a test well located in the SW ¼ SW ¼ of Section 29-T126N-R73W. The test well completion report lists “Topsoil” from 0 to 1 foot below the ground surface, “Yellow Clay” from 1 to 25 feet, “Blue Clay” from 25 to 154 feet, “Gravel” from 154 to 156 feet, “Blue Clay” from 156 to 190 feet, “Coarse Sand to Gravel” from 190 to 209 feet, and “Shale” from 209 to 240 feet below the ground surface. The test well was screened from 190 feet to 210 feet in “Coarse Sand to Gravel” and had a static water level of 25 feet below the ground surface, which indicates there was approximately 165 feet of artesian head pressure in the well at the time of completion (July 3, 2019). Well completion reports on file with the DANR-Water Rights Program for wells completed into the northwestern portion of the Grand aquifer within approximately five miles of the proposed diversion point and the existing wells have saturated aquifer thicknesses ranging from approximately 20 to 30 feet, with the depth to the top of aquifer materials from approximately 170 to 200 feet below the ground surface, and static water levels at well completion varying from approximately 25 to 55 feet below the ground surface (SDGS, 2021b; Water Rights, 2021b and 2021d). Based on the submitted test well completion report, well completion reports on file for nearby wells, and lithologic logs on file for nearby observation wells, the Grand aquifer is expected to be under confined conditions at the proposed diversion point and existing well field (SDGS, 2021b; Water Rights, 2021b and 2021d).

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 Grand aquifer.

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of 1.0 cfs per 70 acres, or “the equivalent thereof.” The statute does provide that: “The Water Management Board may allow a greater diversion, in volume or rate or both, if the method of irrigation, any time constraints on diversion of water, or the type of soil so requires...” Water Permit Application No. 8539-3 proposes to divert water at a maximum rate of 1.78 cfs for the irrigation of 120 acres, from April to October, or at a rate of 1.04 cfs per 70 acres. The applicant did not provide a reason for the requested exceedance.

WATER AVAILABILITY:

Water Permit Application Nos. 8539-3 and 8540-3 propose to appropriate water from the Grand 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 Grand 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 Grand 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 33 observation wells completed into the northwestern portion of the Grand aquifer (Water Rights, 2021b). The five closest

observation wells to the proposed diversion point and existing wells are CA-80C (approximately 2.3 miles northwest), CA-78L (approximately 4.6 miles south), MP-80I (approximately 6.4 miles southeast), CA-78D (approximately 6.7 miles northwest), and CA-78J (approximately 7.5 miles southwest) (as shown in Figure 8). The hydrographs for these observation wells are displayed in Figures 3 to 7 (Water Rights, 2021b). 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.

The hydrographs for the northwestern portion of the Grand aquifer indicate that the aquifer responds well to climatic conditions because water levels are rising during wetter periods (early spring snowmelt and precipitation) and declining to a stable water level during drier periods. Additionally, the water levels in the observation wells display that the amount of recharge to and natural discharge from the aquifer greatly exceeds pumping with the aquifer returning to pre-pumping condition between irrigation seasons. Aquifer recovery indicates that climatic conditions and therefore, the effects of recharge to and natural discharges from the aquifer governs the long-term fluctuations in water level over the aquifer rather than the impacts of pumping from the northwestern portion of the Grand aquifer. By recognizing that both recharge to and natural discharge from an aquifer can be captured for pumping, the observation well hydrographs demonstrate unappropriated water is available for the proposed appropriation.

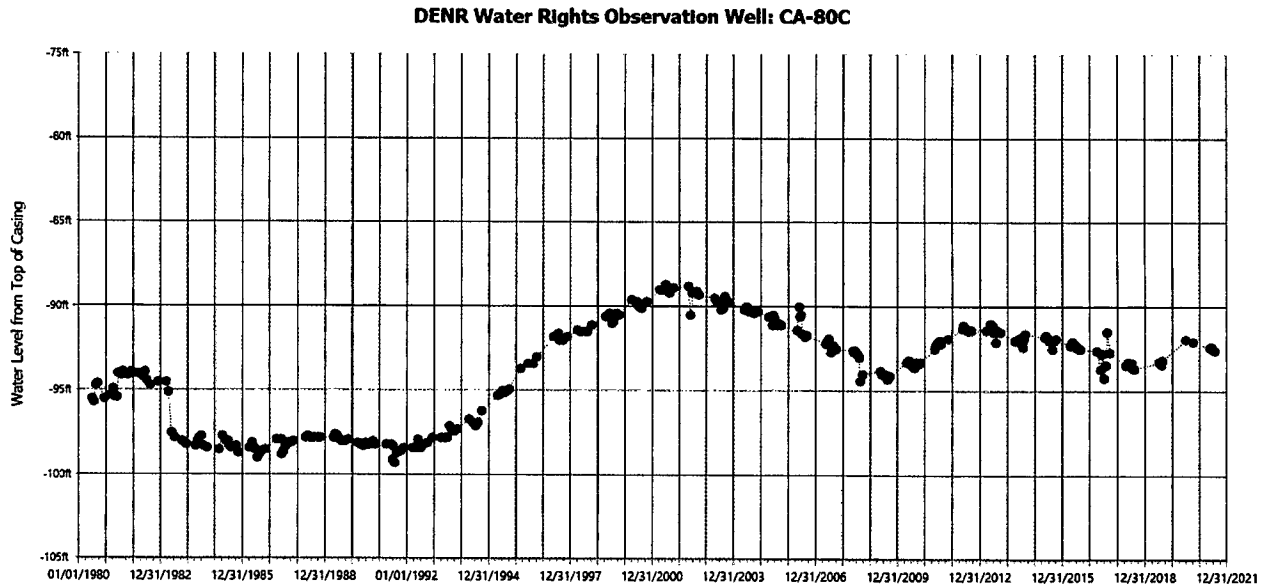


Figure 3. Hydrograph for observation well CA-80C (Water Rights, 2021b)

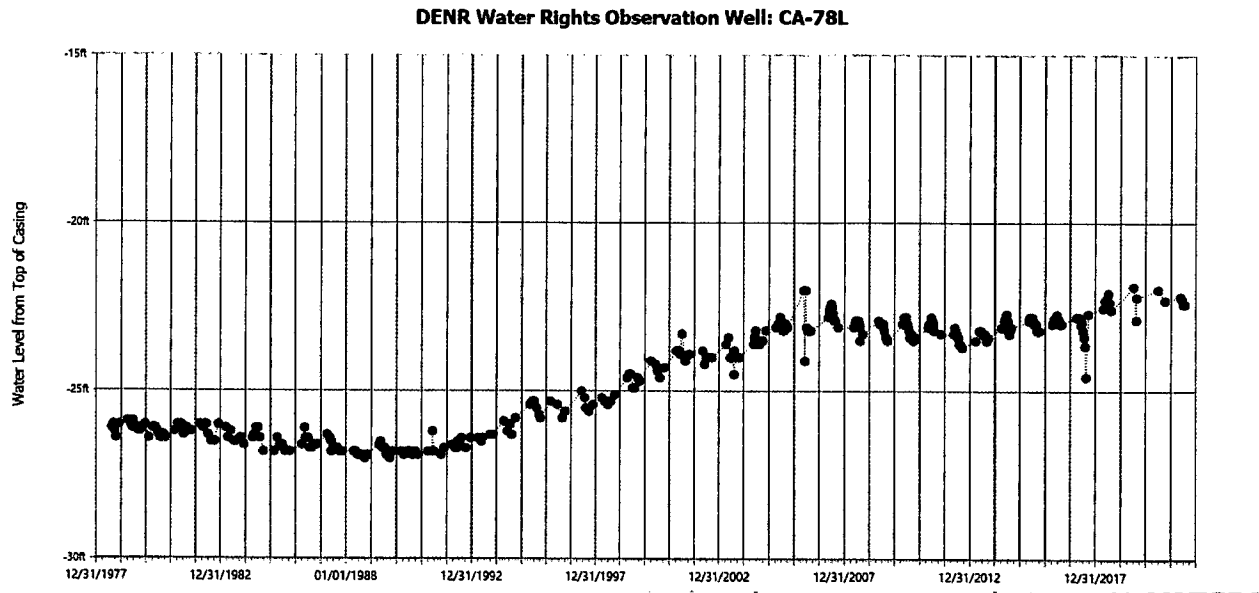


Figure 4. Hydrograph for observation well CA-78L (Water Rights, 2021b)

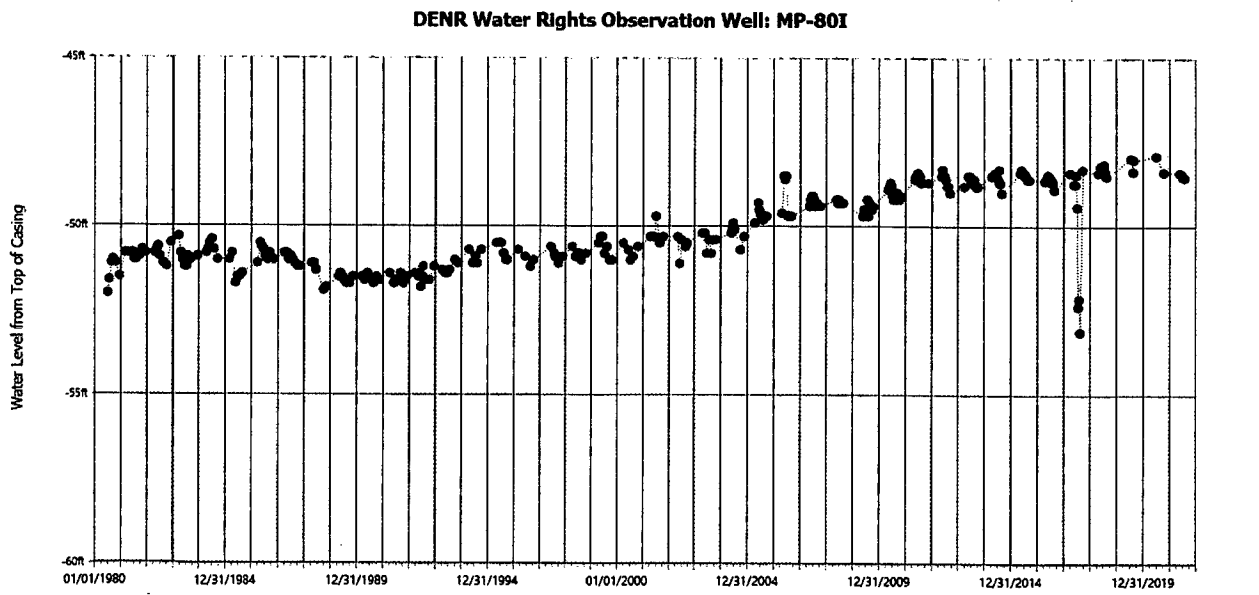


Figure 5. Hydrograph for observation well MP-80I (Water Rights, 2021b)

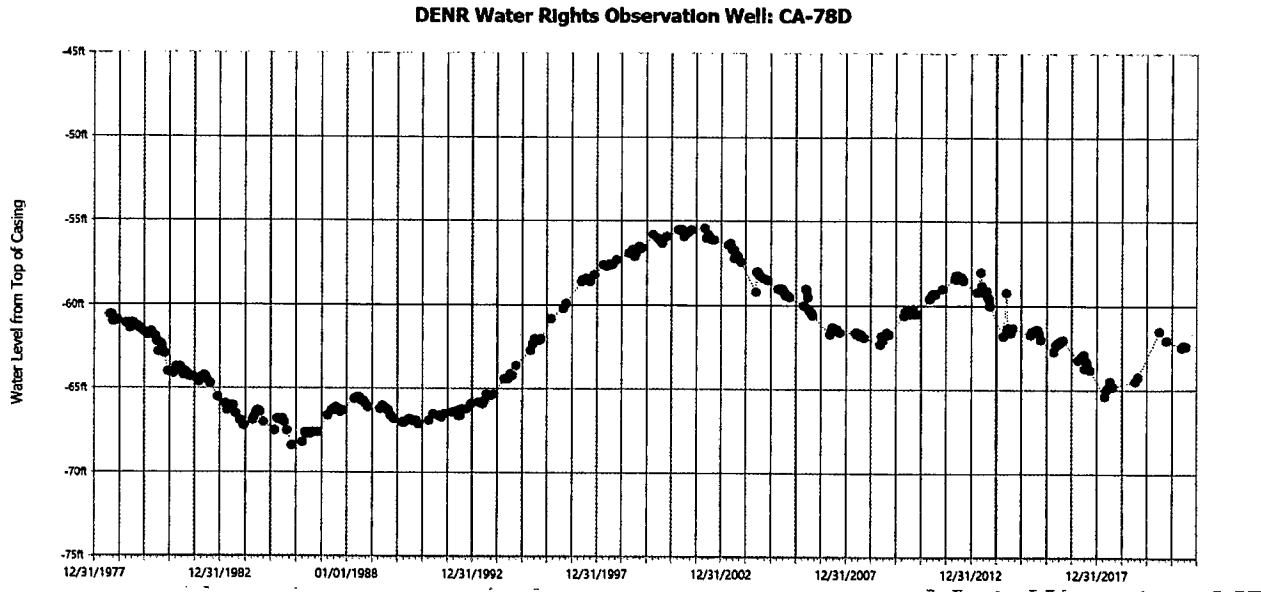


Figure 6. Hydrograph for observation well CA-78D (Water Rights, 2021b)

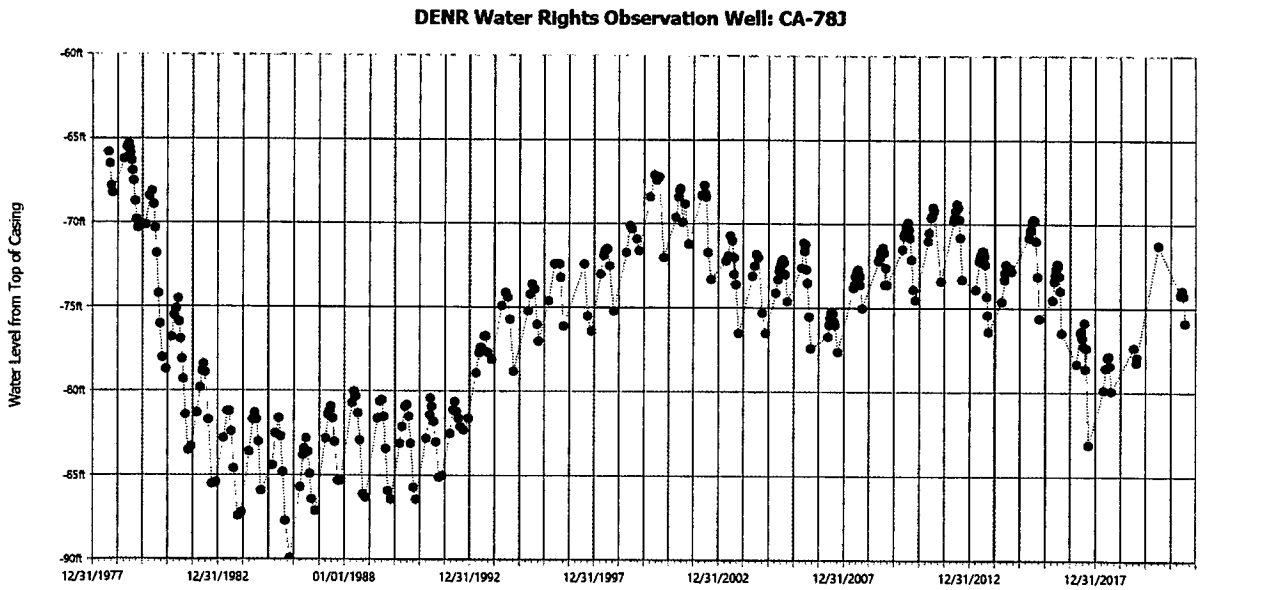


Figure 7. Hydrograph for observation well CA-78J (Water Rights, 2021b)

HYDROLOGIC BUDGET:

Recharge

Recharge to the Grand aquifer is primarily through infiltration of precipitation through overlying sediments and by movement of water from overlying aquifers such as the Selby aquifer in northwestern Walworth County, and from the Bowdle aquifer in southeastern Walworth County (Hamilton, 1982; Kume and Howells, 1987).

Using observation well analysis, Hedges and others (1985) estimated a recharge rate to the unconfined portions of the aquifer to be approximately 4 inches per year. However, these unconfined portions of the Grand aquifer have not been mapped. Hedges and others (1985) have estimated an average annual recharge rate to buried, confined aquifers that ranges from 0.15 to 0.60 inches per year for use by management and development programs. Due to the northwestern portion of the Grand aquifer being mostly under confined conditions and the unconfined portions not being mapped, the lower average annual recharge range of 0.15 to 0.60 inches per year will be used for this analysis.

By multiplying the estimated areal extent of the northwestern portion of the Grand aquifer (360,621 acres) by the average annual recharge rate of 0.15 to 0.60 inches per year, the estimated average annual recharge rate to the northwestern portion of the Grand aquifer varies between 4,507 to 18,031 acre-feet per year (Hedges et al., 1982 and 1985; Rich, 2008; Rich 2010). This is a conservative average annual recharge rate, as the higher recharge rate estimated by Hedges and others (1985) to the unconfined portions of the Grand aquifer is not accounted for in that estimated recharge rate range.

Discharge

Discharge from the Grand aquifer is primarily through well withdrawals and groundwater movement to Lake Oahe (Kume and Howells, 1987; Water Rights, 2021c). Currently, there are 48 water rights/permits authorized to appropriate water from the northwestern portion of the Grand aquifer (Water Rights, 2021c).

Table 3 summarizes the twelve non-irrigation water rights/permits authorized to appropriate water from the northwestern portion of the Grand aquifer with 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 their entire appropriated volume every year. It is estimated that the non-irrigation water rights/permits limited only by a diversion rate will pump at their maximum permitted diversion rate for 60 percent of the time.

The Town of Pollock (Water Right Nos. 778-3 and 5366-3), Town of Glenham (Water Right No. 3998-3), Town of Mound City (Water Right No. 4144-3) and the City of Herreid (Water Right No. 5417-3) are all connected to a rural water system (Drinking Water Program, 2021). These wells for these municipalities are maintained for emergency/standby use (back-up water supply, fire protection etc.) As such, the average annual water use for these municipal rights has been estimated to be zero acre-feet per year on Table 3. The City of Roscoe obtains approximately 75

percent of its water from a rural water system and the City of Hosmer obtains approximately 90 percent of its water from a rural water system (Kilts, 2019). Therefore, it is likely these two municipalities (Water Right Nos. 1705-3 and 4814-3) appropriate less water than the estimated average use values assuming a 60 percent full time pumping rate reflected on Table 3. Overall, the average annual withdrawal rate for the Grand aquifer non-irrigation water rights/permits is approximately 1,137 acre-feet per year (Table 3) (Water Rights, 2021c).

Table 3. Estimated average annual water use from the non-irrigation water rights authorized to appropriate water within the northwestern portion of the Grand aquifer (Water Rights, 2021c; Drinking Water Program, 2021)

Permit No.	Name	Status	Use	Authorized Diversion Rate (cfs)	Authorized Volume (acre-feet)	Estimated Use (acre-feet/year)
778-3	Town of Pollock	LC	MUN	0.56		0
1705-3	City of Hosmer	LC	MUN	0.27		117.3
3998-3	Town of Glenham	LC	MUN	0.12		0
4144-3	Town of Mound City	LC	MUN	0.22		0
4914-3	City of Roscoe	LC	MUN	0.5		217.2
5366-3	Town of Pollock	LC	MUN	0.78		0
5417-3	City of Herreid	LC	MUN	1.17		0
6012-3	West Polluck Association	LC	COM	0.035		15.2
6111-3	Blumengard Colony	LC	COM	0.45		195.5
6185-3	Blumengard Colony	LC	COM	0.667		289.7
7184-3	Jensen Rock & Sand Inc	LC	IND	0.67	20	20
7841-3	Herreid Concrete Inc	LC	IND	1.39	282	282
					TOTAL:	1,137
LC: Licensed Water Right; PE: Water Permit; COM: Commercial; IND: Industrial; MUN: Municipal						

Currently, there are 36 irrigation water rights/permits authorized to appropriate water from the northwestern portion of the Grand aquifer (Water Rights, 2021c). Irrigation water rights/permits have been typically required to report their annual usage on an irrigation questionnaire since 1979. The average annual withdrawal rate for the northwestern portion of the Grand aquifer irrigation water rights/permits, that have reported over the period of record, is approximately 2,430 acre-feet per year (Table 4) (Water Rights, 2021a).

Table 4 lists only 34 water rights/permits as authorized to appropriate water from the northwestern portion of the Grand aquifer, as Water Permit Nos. 8429-3 and 8454-3 were approved in 2020, so their usage is not reflected in the average annual withdrawal rate calculated on Table 4 (Water Rights, 2021c). Collectively, Water Permit Nos. 8429-3 and 8454-3 are authorized to irrigate 192.6 acres (Water Rights, 2021c). 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 reasonably estimate the annual withdrawal rate for these irrigation water permits. Therefore, Water Permit Nos. 8429-3 and 8454-3 are estimated to collectively withdraw approximately 192.6 acre-feet per year (Water Rights, 2021c). Overall, when combining the estimated use by Water Permit Nos. 8429-3 and 8454-3 with the average

annual withdrawal rate for the northwestern portion of the Grand aquifer irrigation water rights/permits, that have reported over the period of record, the average annual withdrawal rate for irrigation water rights/permits within the northwestern portion of the Grand aquifer is approximately 2,623 acre-feet per year.

There are domestic wells completed into the northwestern portion of Grand aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2021d). Due to their relatively low diversion rates, withdrawals from domestic wells are not considered to be a significant portion of the hydrologic budget. Additionally, with the development of rural water systems in areas where the northwestern portion of Grand aquifer is the uppermost aquifer available; it is likely some domestic users may have transitioned to rural water. Therefore, the quantity of water withdrawn by domestic wells is estimated to be negligible to the hydrologic budget for the northwestern portion of the Grand aquifer.

Hydrologic Budget Summary

The average annual recharge rate to the northwestern portion of the Grand aquifer ranges between approximately 4,507 to 18,031 acre-feet per year (Hedges et al., 1982 and 1985; Rich, 2008; Rich 2010).

The average annual withdrawal rate to the northwestern portion of the Grand aquifer plus the appropriation proposed by this application is approximately 3,950 acre-feet per year (non-irrigation: 1,137 acre-feet/year, irrigation: 2,623 acre-feet/year, and Water Permit Application Nos. 8539-3 and 8540-3 (if approved, assuming 12-inch application rate): 190 acre-feet/year) (Water Rights, 2021a and 2021c).

The recharge estimate used for this balance is based on the conservative end of the average annual recharge rate estimated by Hedges and others (1985). Additionally, it is expected that the withdrawals from irrigation users and Water Permit Application Nos. 8539-3 and 8540-3 would be less than what is being used for this balance, as these values are based on an assumed water application rate of 12 inches for each permitted acre for irrigation water rights/permits who have not reported. Given the hydrologic budget, along with the observation well data indicating water is available, there is a reasonable probability unappropriated water is available in the northwestern portion of the Grand aquifer for the appropriation requested by Water Permit Application Nos. 8539-3 and 8540-3.

Table 4. Reported historic irrigation use from the northwestern portion of the Grand aquifer (Water Rights, 2021a)

Year	No. of Permits Reporting	Annual Appropriation (acre-ft)	Reported Pumpage (acre-ft)
1979	22	18,382	1,339
1980	21	17,902	2,334
1981	28	20,782	2,204
1982	22	16,223.6	2,956.4
1983	22	17,681.6	3,067.6
1984	25	19,401.6	3,407
1985	23	18,441.6	3,082
1986	22	18,121.6	2,333
1987	22	18,121.6	2,272
1988	20	16,645.6	2,845.9
1989	20	16,645.6	2,042.1
1990	20	16,645.6	2,335
1991	20	16,645.6	1,853
1992	19	15,632.6	1,205
1993	18	13,760.6	727
1994	17	13,370.6	1,695.4
1995	16	12,890.6	1,092.6
1996	15	11,394.6	1,172
1997	15	11,394.6	1,422
1998	15	11,394.6	1,245.1
1999	15	11,394.6	1,162.7
2000	16	10,797.6	1,317.8
2001	16	10,797.6	1,220.1
2002	17	11,061.6	2,646
2003	17	11,061.6	1,784.7
2004	17	11,061.6	1,621.8
2005	18	11,701.6	1,842.9
2006	18	11,653.6	3,892.6
2007	19	12,163.4	2,352
2008	19	12,163.4	2,660.4
2009	19	12,163.4	2,334.9
2010	19	12,163.4	2,903.8
2011	21	13,219.4	2,428.5
2012	23	13,755.4	3,206.3
2013	28	16,277.4	3,983.2
2014	29	16,817.4	2,984.3
2015	30	17,527.4	4,061.8
2016	34	17,882.6	4,115.2
2017	33	17,474.6	5,180.6
2018	33	17,474.6	4,797.9
2019	32	16,994.6	1,299.8
2020	34	17,746.6	3,619.5
Max	34	20,782	5,181
Min	15	10,798	727
Avg	22	14,877	2,430

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are 48 water rights/permits authorized to appropriate water from the northwestern portion of the Grand aquifer (Water Rights, 2021c). The closest water right/permit (not held by the applicant) to the proposed diversion point and existing wells is Water Permit No. 8092-3 which is held by Roy Grismer. The diversion point for Water Permit No. 8092-3 is located approximately 6.3 miles southeast of the proposed diversion point and existing wells for these applications (Table 5) (Figure 8) (Water Rights, 2021c).

There are domestic wells on file with the DANR-Water Rights Program that are completed into the northwestern portion of the Grand aquifer, with the closest domestic well on file (not held by the applicant) approximately 0.6 miles southwest of the proposed diversion point and existing wells (Water Rights, 2021d). There could potentially be other domestic wells completed into the northwestern portion of the Grand aquifer near the proposed diversion point and existing wells that are not on file with the DANR-Water Rights Program.

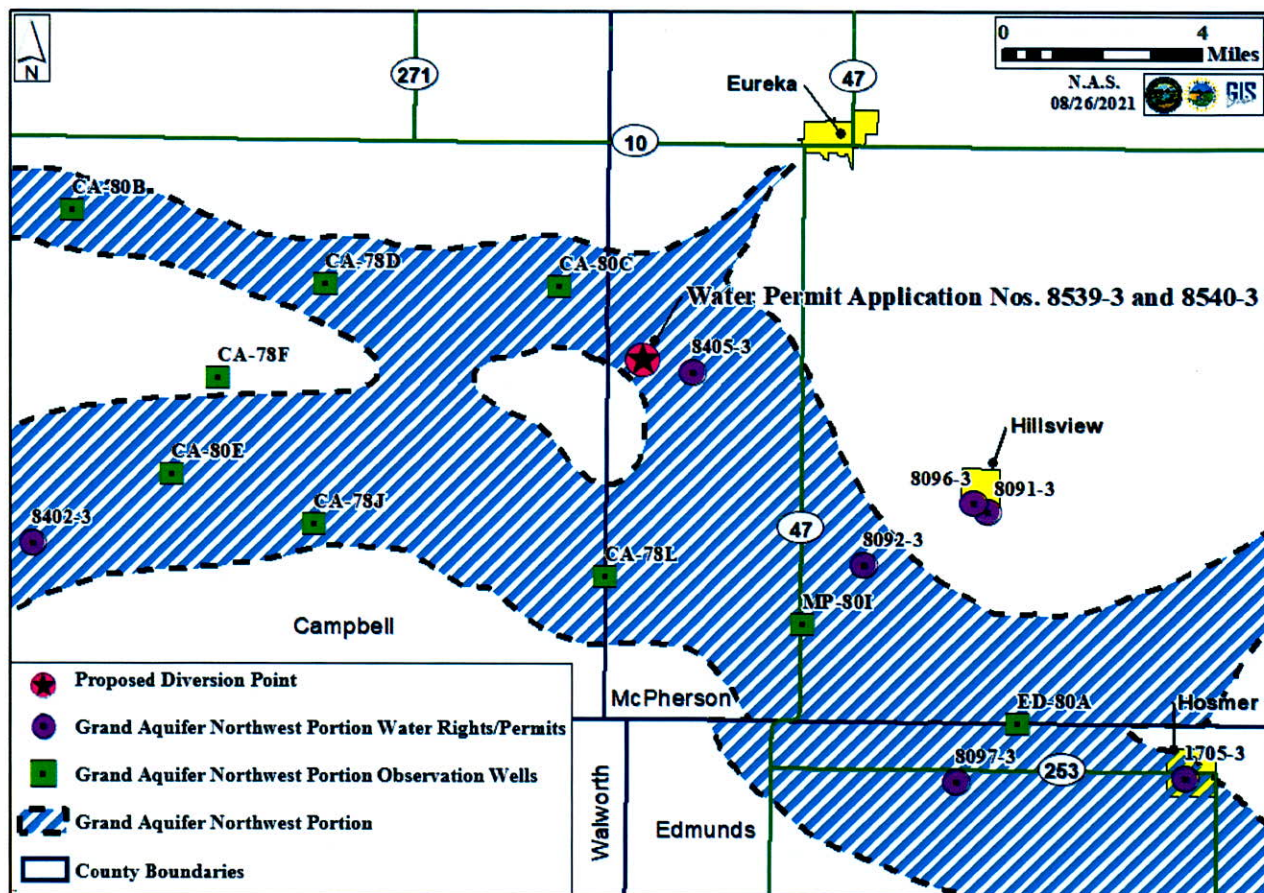


Figure 8. Location of the proposed diversion point by Water Permit Application No. 8539-3 and the existing wells proposed to be used by Water Permit Application No. 8540-3, with the nearby water rights/permits authorized to appropriate water from the northwestern portion of the Grand aquifer (Water Rights, 2021c), and the observation wells used in this analysis (Water Rights, 2021b)

Table 5. Water rights/permits authorized to appropriate water from the northwestern portion of the Grand aquifer within approximately fifteen miles of the proposed diversion point and the existing wells, as shown in Figure 8 (Water Rights, 2021c)

Permit No.	Name	Status	Use	Authorized Diversion Rate (cfs)
1705-3	City of Hosmer	LC	MUN	0.27
8091-3	Roy Grismer	PE	IRR	2.67
8092-3	Roy Grismer	PE	IRR	2.67
8096-3	Jeffrey Aman	PE	IRR	2.28
8097-3	Jeffrey Aman	PE	IRR	2.67
8402-3	Roger Volzke	PE	IRR	3.33
8405-3	Bieber Enterprises Inc	PE	IRR	1.78
LC: Licensed Water Right; PE: Water Permit; IRR: Irrigation; MUN: Municipal				

The northwestern portion of the Grand aquifer is expected to be under confined conditions at the applicant's proposed diversion point based on the well completion reports for nearby wells and lithologic logs on file for nearby observation wells (SDGS, 2021b; Water Rights, 2021b and 2021d). Since the northwestern portion of the Grand aquifer is expected to be confined at the proposed diversion point, drawdown can extend some distance but the exact drawdown behavior of a well cannot be known without an aquifer performance test. However, observation wells completed into the Grand aquifer in western McPherson County near permitted/licensed diversion points can provide some insight on how the aquifer responds to pumping.

Observation well CA-78I (approximately 15 miles southwest of the proposed diversion point and existing wells) has 13 high-yield irrigation wells (assumed to be a well with an authorized diversion rate greater than 0.2 cfs) within approximately 2.5 miles of it (Water Rights, 2021b and 2021c). The lithologic log on file for CA-78I noted the well was drilled 320 feet deep, had a casing stickup height of 2.7 feet, and the top of aquifer materials are expected to be approximately 256 feet below the ground surface (SDGS, 2021b; Water Rights, 2021b). The lowest recorded static water level on the hydrograph is approximately 145 feet (as seen on Figure 9), which indicates there was still about 110 feet of artesian head pressure in CA-78I even during drier periods when high-yield irrigation wells are expected to be pumping more water (Water Rights, 2021b).

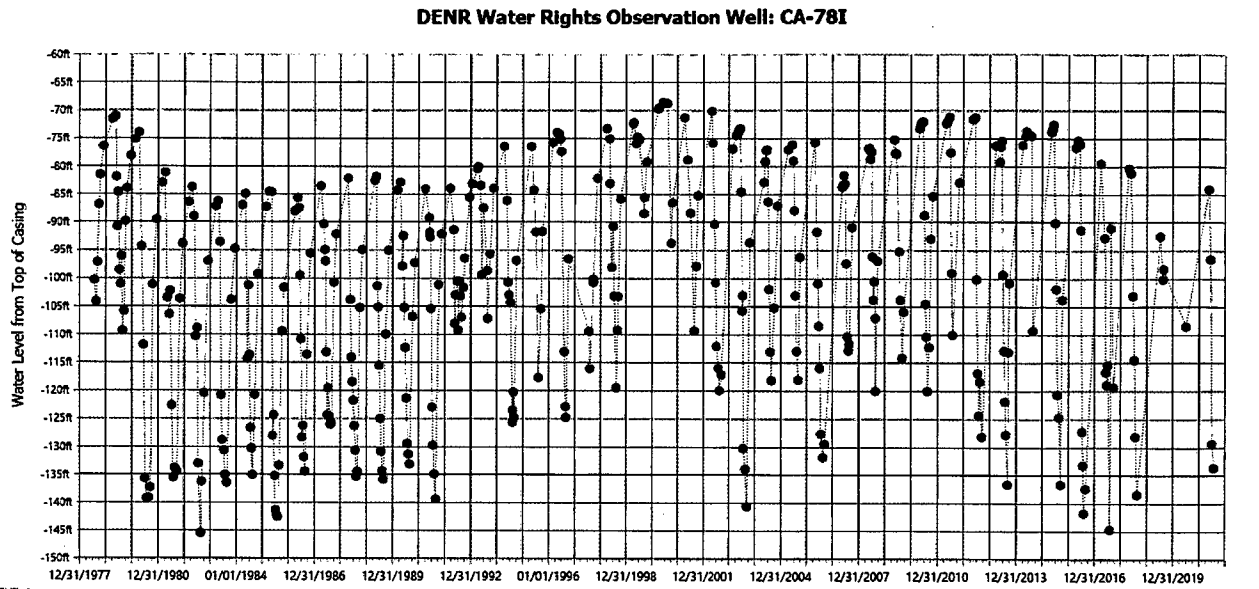


Figure 9. Hydrograph for observation well CA-78I (Water Rights, 2021b)

Near the proposed diversion point and existing wells, the Grand aquifer is expected to have a saturated aquifer thickness ranging from approximately 20 to 30 feet, with the depth to the top of aquifer materials from approximately 170 to 200 feet below the ground surface, and a static water level at well completion varying from approximately 25 to 55 feet below the ground surface (SDGS, 2021b; Water Rights, 2021b and 2021d). This would allow for enough thickness for a pump to be placed 20 feet below the top of the aquifer, which is required for the well to be considered adequate under ARSD 74:02:04:20 (6). Any drawdown as a result of the proposed diversion is not expected to unlawfully impair nearby adequate wells. In McPherson County, there has been one complaint filed with the DANR-Water Rights Program regarding well interference in a glacial aquifer identified as the Hillview aquifer; however, after investigation, the complaint was determined to be unsubstantiated (Water Rights, 2021e). In Campbell and McPherson Counties, there are no complaints on file with the DANR-Water Rights Program regarding well interference for adequate wells completed into the Grand aquifer (Water Rights, 2021e).

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 northwestern portion of the Grand 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 saturated thickness of the Grand aquifer in McPherson County, the artesian head pressure in observation wells and appropriative user's wells completed into the Grand aquifer near the proposed diversion point and existing wells, and the lack of well interference complaints within Campbell and McPherson Counties, 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. 8539-3 proposes to appropriate water at a maximum instantaneous diversion rate of 1.78 cfs from one well to be completed into the Grand aquifer (approximately 210 feet deep) for the irrigation 120 acres. The applicant is requesting a diversion rate greater than the statutory limit of 1.0 cfs per 70 acres. The site is in McPherson County approximately six miles southwest of Eureka, South Dakota.
2. The applicant holds Water Permit No. 8405-3 which authorizes a maximum instantaneous diversion rate of 1.78 cfs from two wells completed into the Grand aquifer (209 feet deep) for the irrigation of 136 acres. Water Permit Application No. 8540-3 proposes to irrigate 70 acres from the two existing wells authorized under Water Permit No. 8405-3. If approved, Water Permit Application No. 8540-3 and Water Permit No. 8405-3 will collectively authorize a maximum instantaneous diversion rate of 1.78 cfs for the irrigation of 206 acres.
3. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the northwestern portion of the Grand aquifer to supply the proposed appropriation.
4. There is a reasonable probability that the proposed diversions by Water Permit Application Nos. 8539-3 and 8540-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic users.

Nakaila Steen

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

Reviewed by:



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

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WATER RIGHTS
PROGRAM

STATE OF South Dakota: COUNTY OF McPherson

I, Makena Vocu, am authorized by the publisher as agent to make this affidavit of publication.
Under oath, I state that the following is true and correct.

The Northwest Blade is a newspaper which is published weekly and is of general circulation and is in compliance with South Dakota Newspaper Association legalized Statutes.

The notice has been published in the newspaper listed above.

DATE(S) OF PUBLICATION

10/14 - Appropriate Water / JD Bieber Enterprises

NAME OF THE CORPORATION/GOVERNMENT OFFICE: Water Rights Program

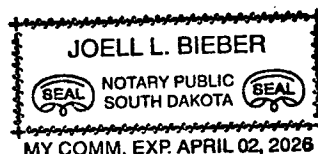
TYPE OF DOCUMENT: legal

AUTHORIZED SIGNATURE: Makena Vocu

SUBSCRIBED AND SWORN TO BEFORE ME ON THE

20th DAY OF October, 2021.

NOTARY SIGNATURE: Joell L. Bieber



**NOTICE OF APPLI-
CATION NOS. 8539-3
and 8540-3 to Ap-
propriate Water**

Notice is given that JD Bieber Enterprises, Inc., c/o Sarah Bieber, PO Box 340, Bowdle SD 57428 has filed the following water permit applications. Application No. 8539-3 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Grand Aquifer (approximately 210 feet deep) located in the N 1/2 SE 1/4 Section 30 for irrigation of 120 acres located in the S 1/2 NE 1/4, E 1/2 SE 1/4, NW 1/4 SE 1/4 Section 30; all in T126N-R73W. The applicant is requesting a diversion rate greater

than the statutory limit of 1 cfs per 70 acres. This site is located approximately 6 miles southwest of Eureka SD.

Application No. 8540-3 proposes to irrigate 70 additional acres. Water Permit No. 8405-3 authorizes 1.78 cfs from two wells completed into the Grand Aquifer (209 feet deep) located in the approximate center of the SE 1/4 and the SW 1/4 SE 1/4 Section 29 for irrigation of 136 acres located in the SE 1/4 Section 29; all in T126N-R73W. This application proposes to irrigate an additional 70 acres located in the N 1/2 NE 1/4 Section 32-T126N-R73W from the existing wells. This application, if approved, and Wa-

ter Permit No. 8405-3 will authorize a total of 1.78 cfs for irrigation of 206 acres. This site is located approximately 6 miles southwest of Eureka SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8539-2 and 8540-3 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 qualifica-

tions, the applications, 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.

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Aberdeen News
Watertown Public Opinion

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WATER RIGHTS PROGRAM

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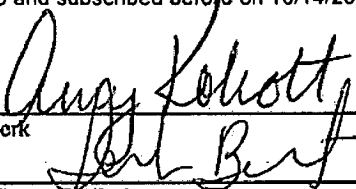
Sarah Bieber
c/o Sarah Bieber
JD Bieber Enterprises Inc
Po Box 340
Bowdle SD 57428-0340

STATE OF SOUTH DAKOTA, COUNTY OF BROWN

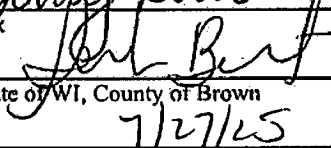
The AMERICAN NEWS is a daily newspaper of general circulation, printed and published in Aberdeen, Brown County, South Dakota, and has been such a newspaper during the times hereinafter mentioned; and personal knowledge of the facts herein state that the notice hereto annexed was Published in said newspapers in the issue dated:

10/14/2021

That said newspaper is a legal newspaper published five days or more each week; with a bona fide circulation of more than two hundred copies daily; published in the English language within the said county of Brown for more than one year prior to the first publication of said notice; and printed in whole in an office maintained at the place of publication of said newspaper.
Sworn to and subscribed before on 10/14/2021



Legal Clerk



Notary, State of WI, County of Brown

7/27/25

My commission expires

Publication Cost: \$57.08

Order No: 6371827

of Copies:

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1

PO #: 8539-3 and 8540-3

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

SARAH BERTELSEN
Notary Public
State of Wisconsin

**NOTICE OF
APPLICATION
NOS. 8539-3 and 8540-3 to
Appropriate Water**

Notice is given that JD Bieber Enterprises, Inc., c/o Sarah Bleber, PO Box 340, Bowdle SD 57428 has filed the following water permit applications. Application No. 8539-3 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Grand Aquifer (approximately 210 feet deep) located in the N 1/2 SE 1/4 Section 30 for irrigation of 120 acres located in the S 1/2 NE 1/4, E 1/2 SE 1/4, NW 1/4 SE 1/4 Section 30; all in T126N-R73W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 6 miles southwest of Eureka SD.

Application No. 8540-3 proposes to irrigate 70 additional acres. Water Permit No. 8405-3 authorizes 1.78 cfs from two wells completed into the Grand Aquifer (209 feet deep) located in the approximate center of the SE 1/4 and the SW 1/4 SE 1/4 Section 29 for irrigation of 136 acres located in the SE 1/4 Section 29; all in T126N-R73W. This application proposes to irrigate an additional 70 acres located in the N 1/2 NE 1/4 Section 32-T126N-R73W from the existing wells. This application, if approved, and Water Permit No. 8405-3 will authorize a total of 1.78 cfs for irrigation of 206 acres. This site is located approximately 6 miles southwest of Eureka SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8539-2 and 8540-3 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 applications, 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.

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Published once at the total approximate cost of \$57.08



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

October 4, 2019

JD Bieber Enterprises, Inc.
c/o Sarah Bieber, President
PO Box 340
Bowdle SD 57428

Dear Ms. Bieber:

Water Permit Application Nos. 8539-3 and 8540-3 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 Northwest Blade printed at Eureka SD (Ph # 605 284-2631) and the American News printed at Aberdeen SD (Ph # 605 281-1605). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and report on the applications 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,

Karen Schlaak

Karen Schlaak
Water Rights Program
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendations, 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 applications.

NOTICE OF APPLICATION NOS. 8539-3 and 8540-3 to Appropriate Water

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PIERRE SD 57501-3182
danr.sd.gov

NOV 30 2021

JD Bieber Enterprises Inc
c/o Sarah Bieber
PO Box 340
Bowdle SD 57428

Dear Ms. Bieber:

Enclosed are Water Permit Nos. 8539-3 and 8540-3 authorizing construction of the water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Form 10's, *Notice of Completion of Works and Application of Water to Beneficial Use*, are enclosed. Please return the completed forms after you have finished the systems 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