

WATER PERMIT NO. 8491-3

Name of Applicant: Mike Barber

Address: 5501 S Sycamore Ave, Sioux Falls SD 57108

Phone: 605 370-3866

Amount of Water Claimed: 2.56 cfs

Total Acres: 232 acres

Source of Water Supply: groundwater (up to 4 wells)

Water to be used for: irrigation

County: Lincoln

Type of Waste Disposal System:

Location: 3 miles northeast of Canton

PRIORITY

Date Received: 2-19-21

Application/License Fee: \$ 1150

Corrected Application Received:

Period of Annual Use: April 1 – October 31

Remarks:

Diversion Point: E 1/2 NE 1/4 Sec 32-T99N-R48W

Land to be Irrigated: W 1/2 SE 1/4, SE 1/4 SW 1/4

Sec 29 and NE 1/4 Sec 32; all in T99N-R48W



Depth of Well: 100 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 2-19-21

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8491-3**

Date of first receipt of application February 19, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8491-3 to Mike Barber, 5501 S Sycamore Ave, Sioux Falls D 57108 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. 8491-3 appropriates 2.56 cubic feet of water per second from up to four wells to be completed into the Big Sioux:South Aquifer (less than 100 feet deep) located in the E 1/2 NE 1/4 Section 32 for irrigation of 232 acres located in the W 1/2 SE 1/4, SE 1/4 SW 1/4 Section 29 and the NE 1/4 Section 32; all in T99N-R48W. This site is located approximately 4 miles northeast of Canton 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 February 19, 2021.
4. The date of approval of Permit No. 8491-3 is May 3, 2021.
5. One-fifth of the construction is to be completed on or before November 3, 2023.
6. All construction is to be completed on or before May 3, 2026.
7. Water is to be put to beneficial use on or before May 3, 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 No. 8491-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 8491-3 shall be constructed by a licensed well driller and construction of the wells and installation of the pumps shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casings 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

MAY 12 2021

date



FEB 19 2021

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

WATER RIGHTS
PROGRAM

PAID

FEB 19 2021

Ck# 2701

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8491-3</u>	(office use only) Hydrologic Unit <u>10170203</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>Sioux Valley News, Canton</u>	
	<u>Argus Leader</u>	

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 Mike Barber

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

Mailing Address 5501 S Sycamore Ave Sioux Falls SD 57108
(Address) (City) (State) (Zip Code)

Phone _____ Mobile 605-370-3866 Email mikebarber@globeexpress.com

2. Amount of water claimed 2.56 *CFS or 1150 **GPM ***AF Total Acreage 232
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Well or battery of wells

4. Location of point of diversion Up to 4 wells in E 1/2 NE 1/4 Sec 32-T99N-R48W
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

County Lincoln

5. County or counties where water will be used Lincoln

6. Annual period during which water is to be used April - October 31

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
NW 1/4 SE 1/4 Sec 29 T99N-R48W	30	NE 1/4 NE 1/4 Sec 32 T99N-R48W	25
SW 1/4 SE 1/4 "	30	SW 1/4 NE 1/4 "	40
SE 1/4 SW 1/4 "	40	SE 1/4 NE 1/4 "	34
NW 1/4 NE 1/4 Sec 32 T99N-R48W	33		

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

Install subsurface drip irrigation on 232 Acres using a well or battery of wells for row crop production i.e. corn, soybeans, oats

I, Mike Barber, 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 14 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

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

For either Existing or Proposed Wells: *(This well will be test drilling asap)*

c) Well Depth (required) < 100' Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____

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

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

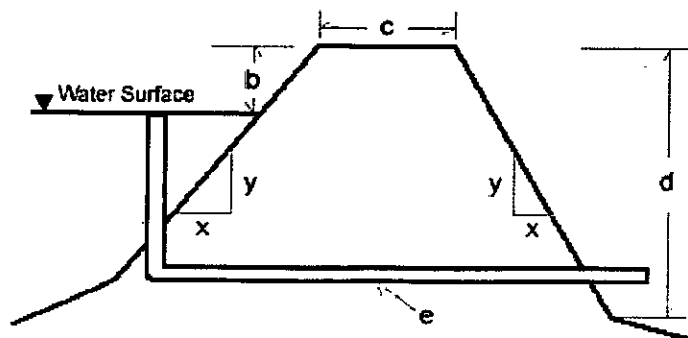
a) Surface Dimensions _____ Depth _____

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) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres

SD T99N R48W

Sec 29

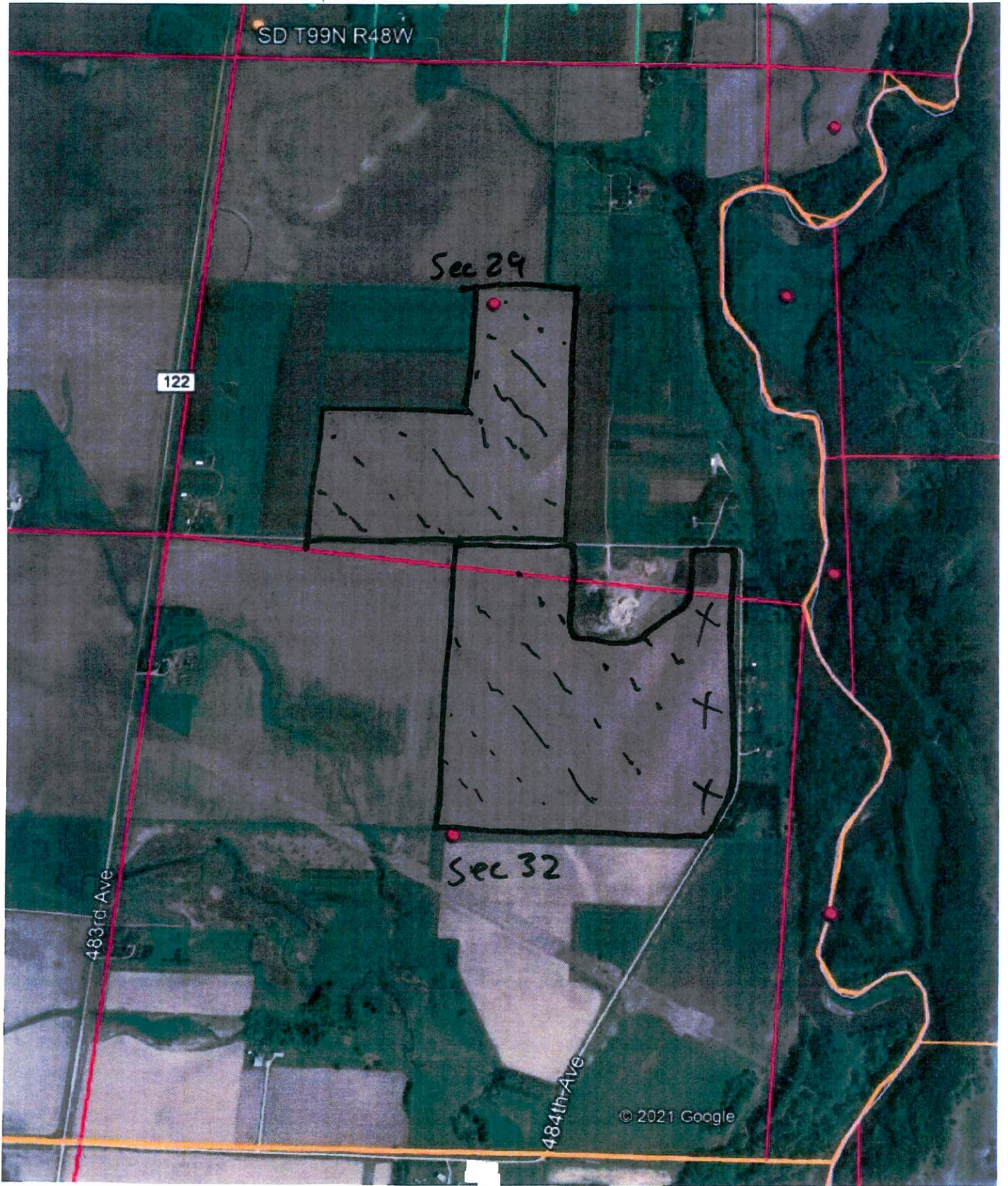
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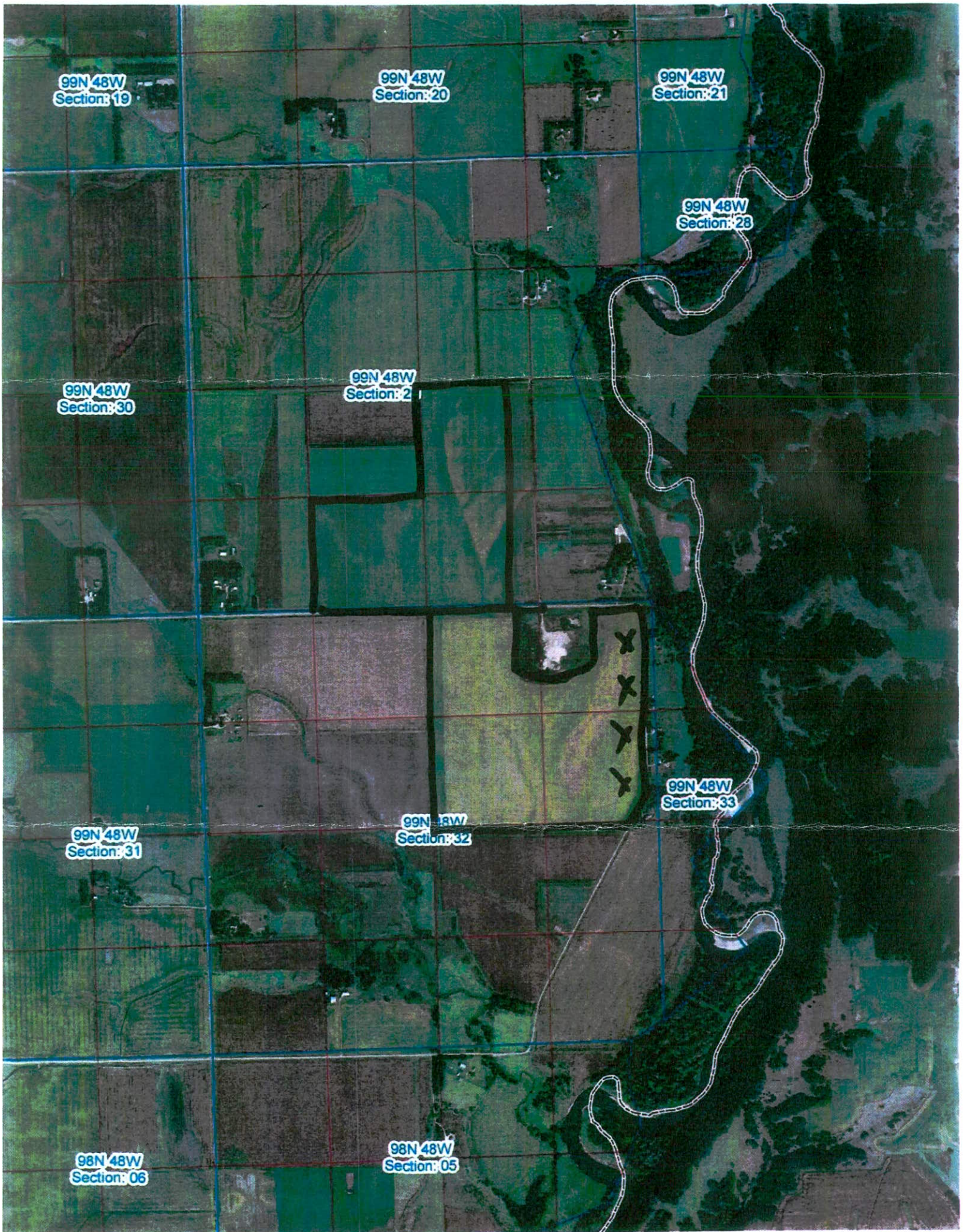
483rd Ave

Sec 32

484th Ave

© 2021 Google





RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date February 19, 2021

RECEIVED OF Barber Farms LLC/Mike Barber 26855 Sycamore Ave. Sioux Falls SD 57108

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

Fee for Application for Permit No. <u>8491-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$950.00
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>8491-3</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	\$1150.00

By Eric Gronlund
Chief Engineer

One

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, February 16, 2021 9:43 AM
To: kurt@nutradrip.com
Subject: FW: [EXT] Barber water permit application
Attachments: 0524.pdf

Kurt,
Your email was forwarded to me. I have reviewed the application. Attached is an ArcMap for the location indicated on the application. The section and quarter-quarter lines are different from your map. The breakdown of acreage by the quarter-quarter on the application is incorrect. Based on what was outlined on your map, I came up with the following. If you agree, change the application accordingly.

Land to be irrigated:

Section 29-T99N-R48W	SE ¼ SW ¼	40 acres
	SW ¼ SE ¼	30 acres
	NW ¼ SE ¼	30 acres
Section 32-T99N-R48W	NW ¼ NE ¼	33 acres
	SW ¼ NE ¼	40 acres
	SE ¼ NE ¼	34 acres
	<u>NE ¼ NE ¼</u>	<u>25 acres</u>
Total		232 acres

Up to three wells to be located in the E ½ NE ¼ Section 32-T99N-R48W

The application/license fee for irrigation of 232 acres will be \$1,150.00. There is a fee charged when paying credit card. Please send a check with the signed application. If you have questions, please let me know.

Karen Schlaak

Water Rights Program
(605) 773-3352



DENR
SOUTH DAKOTA

From: Kurt Grimm <kurt@nutradrip.com>
Sent: Friday, February 12, 2021 11:25 AM
To: Gronlund, Eric <Eric.Gronlund@state.sd.us>; mikebarber@aglabexpress.com
Cc: Esther Barber <joebarber75@gmail.com>
Subject: [EXT] Barber water permit application

Eric,

Attached is a water permit application for new irrigation for Mike Barber. Before I have Mike sign this, can you please review and let me know if we missed anything? I spoke with Adam the state hydrologist last week and he indicated there is sufficient information about the aquifer in this area to proceed with application without test hole data. He said to note we will be in the shallow Big Sioux aquifer. We have Thein Well lined up to test drill as soon as weather permits. Too cold right now! Barbers would like to have irrigation in place for 2021 growing season so we want to get the ball rolling on the permit as soon as possible.

Also, is there a way to pay the fees online, or do we need to mail a check with original copy of application?

Thanks!

Kurt Grimm
www.nutradrip.com
785-547-5209



DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8491-3, Mike Barber**

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. 8491-3, Mike Barber, 5501 S Sycamore Ave, Ft. Sioux Falls SD 57108.

The Chief Engineer is recommending APPROVAL of Application No. 8491-3 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 rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under Water Permit No. 8491-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 8491-3 shall be constructed by a licensed well driller and construction of the wells and installation of the pumps shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casings 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
April 15, 2021

**REPORT TO THE CHIEF ENGINEER
WATER PERMIT APPLICATION NO. 8491-3
MIKE BARBER
APRIL 16, 2021**

Water Permit Application No. 8491-3 proposes to appropriate water at a maximum instantaneous diversion rate of 2.56 cubic feet per second (cfs) from the Big Sioux: South aquifer. The applicant intends to divert water from up to four, less than 100 feet-deep, wells to be located in the E ½ NE ¼ Section 32 for irrigation of 232 acres located in the W ½ SE ¼, SE ¼ SW ¼ Section 29 and the NE ¼ Section 32; all in T99N-R48W. The site is located approximately 4.0 miles northeast of Canton, SD.

AQUIFER: Big Sioux: South (BS:S)

Aquifer Characteristics

The Big Sioux: South aquifer underlies the floodplain of the Big Sioux River and is a surficial, glacial outwash deposit composed of fine sand to very coarse gravel (Niehus, 1994). It comprises 49,000 acres in Lincoln, Minnehaha, and Union Counties with an estimated 163,740 ac-ft of recoverable water in storage (Hedges et al., 1982). The top of the Big Sioux: South aquifer can be encountered at an average depth of 12 feet (ranging between 1-118 feet) below the ground surface with the water level at an average depth of 13 feet (Niehus, 1994). Niehus (1994) also noted that the aquifer is primarily under water-table conditions with the general direction of groundwater movement to the south.

No test hole or well information was submitted with the application. Well completion reports in the vicinity of the proposed application show an average of 5.6 feet of topsoil overlying an average thickness of 34.4 feet thick water bearing sand and gravel layer with an average groundwater surface encountered at 12.6 feet below the ground surface (Water Rights, 2021a and 2021b).

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 reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights, and that the proposed use is a beneficial use and in the public interest. This report will address water availability and potential for unlawful impairment of existing water rights within the Big Sioux: South aquifer.

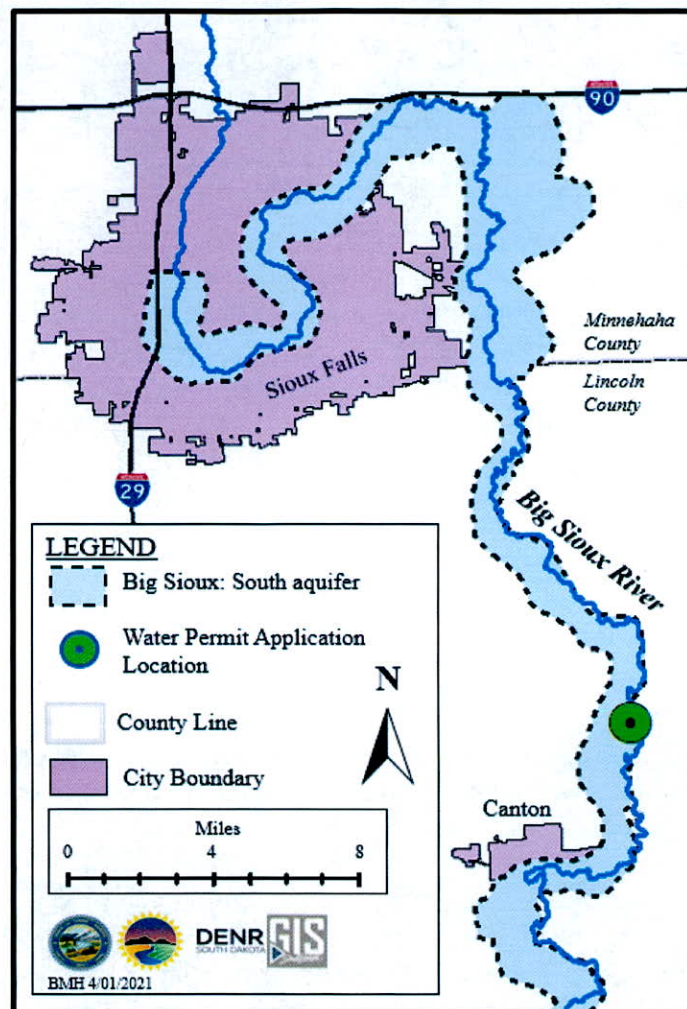


Figure 1. Water Permit Application No. 8491-3 shown within the Big Sioux: South aquifer boundary (modified from: Hedges et al., 1982).

WATER AVAILABILITY

Water Permit Application No. 8491-3 proposes to appropriate water from the Big Sioux: South aquifer. The probability of unappropriated water being available from an 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..." If the source of the water is older or lower than the Greenhorn Formation and a water distribution system as defined by SDCL 46-1-6(17) has applied for a permit, the Board need not consider the balance of recharge to and withdrawal from the aquifer. For this application, a water distribution system is not involved and the aquifer is not older or lower than the Greenhorn Formation; therefore, the balance of recharge and withdrawal must be considered.

Hydrologic Budget

Recharge:

Recharge to the Big Sioux aquifer occurs through the infiltration of precipitation where the aquifer is at or near the land surface and through its hydrologic connection to the Big Sioux River and the

Schindler, Newton Hills, and Missouri aquifers. (Niehus, 1994). Hedges et al. (1985) utilized observation well data to calculate a recharge rate of 4.1 inches per year for the aquifer. This results in an estimated average annual recharge of 16,742 ac-ft for the Big Sioux: South aquifer.

Discharge:

Discharge from the Big Sioux: South aquifer occurs through evapotranspiration where the aquifer is at or near the land surface and through its hydrologic connection to the Big Sioux River and the Schindler, Newton, and Missouri aquifers. (Niehus, 1994). Currently, there are 63 water rights/permits (23 non-irrigation, 38 irrigation, and 2 future use) appropriating water from the Big Sioux: South (Water Rights, 2021a). Table 1 shows a summary of non-irrigation water rights/permits with their appropriation and estimated annual expected use. The total estimated volume of water to be withdrawn can be determined by assuming that water rights/permits limited by an annual volume will pump the entire volume appropriated annually or that water rights/permits limited by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time.

There are 6 non-irrigation permits (Nos. 6093-3, 6423-3, 6924-3, 7787-3, 8366-3, and 8462-3) that are required to report their annual usage. All six permits are included in Table 1 with their appropriation estimated as their authorized annual volume limit. Water Right Nos. 6093-3, 6423-3, and 6924-3 all report usage that is approximately 33 percent of the authorized usage (Water Rights, 1979-2019a) however, their full appropriation is included in anticipation of future development of their systems. Water Right No. 7787-3 is a newer permit that reports its usage in combination with a surface water permit (No. 5996-3) from the same location. These permits report values greater than the annual limit for Water Right No. 7787-3 (Water Rights, 1979-2019a). However, Water Right No. 5996-3 is limited only by diversion rate and the combined reported pumpage from both permits is less than the estimate of annual pumping under Water Right No. 5996-3. Water Permit Nos. 8366-3 and 8462-3 are currently under development and have yet to report usage. An approximate value of 5,959 ac-ft/yr will be included in the water balance section for non-irrigation permits

Table 1. Non-irrigation water rights/permits from the Big Sioux: South aquifer with permitted appropriation and estimated volume water use (Water Rights, 2021a).

Use ^a	Number of Water Rights/Permits	Appropriation limited by Annual Volume (ac-ft/yr)	Appropriation limited by Diversion Rate (cfs)	Total Estimated Volume (ac-ft/yr)
COM	7		2.26	981.74
GWR	2		0.40	173.76
IND	6	1,270.0	1.11	1,752.18
MUN	4		2.21	960.02
RWS	4	1,874.0	0.50	2,091.20
Total:	23	3,144.0	6.48	5,958.90
a - COM: Commercial; GWR: Groundwater Remediation; IND: Industrial; MUN: Municipal; RWS: Rural Water System				

Well withdrawals from the Big Sioux: South aquifer also occur for irrigation use. Table 2 shows the historic irrigation water use from the aquifer as reported to the DENR-Water Rights Program through annual irrigation questionnaires. Currently, there are 38 water rights/permits for irrigation with 9,474.4 total permitted acres for irrigation (Water Rights, 2021a). The average annual

reported pumping is approximately 1,098 ac-ft/yr (Water Rights, 1979-2019b) to be included in the water balance section for irrigation permits.

Table 2. Historic irrigation pumpage from the Big Sioux: South aquifer (Water Rights, 1979-2019b).

Year	Number of Permits Reporting	Appropriation (acre-feet/year)	Pumpage (acre-feet/year)
1979	29	12,596.0	603.00
1980	29	12,596.0	575.00
1981	30	12,626.0	885.00
1982	22	7,430.1	467.84
1983	26	8,816.0	648.45
1984	25	8,756.0	805.50
1985	25	8,756.0	987.70
1986	26	9,103.0	873.70
1987	26	9,346.1	1,007.20
1988	27	9,426.1	2,112.15
1989	23	8,037.1	1,308.05
1990	26	9,301.1	1,188.30
1991	27	8,722.1	728.79
1992	28	9,080.1	206.15
1993	30	9,502.1	165.50
1994	29	8,899.0	898.30
1995	30	9,103.0	894.90
1996	30	9,066.0	957.31
1997	29	8,804.0	1,311.00
1998	29	9,218.0	817.90
1999	30	9,398.0	1,024.77
2000	31	9,436.0	1,351.59
2001	31	9,436.0	1,001.67
2002	32	9,694.0	1,193.39
2003	29	8,892.0	1,727.72
2004	29	8,853.0	1,279.94
2005	30	8,603.0	1,541.11
2006	30	8,603.0	1,709.10
2007	29	8,408.0	1,918.11
2008	30	8,688.0	1,157.44
2009	31	8,716.0	419.48
2010	32	8,949.0	139.15
2011	31	8,716.0	1,721.93
2012	32	9,036.0	2,403.22
2013	36	10,388.0	2,190.83
2014	36	10,440.0	1,011.89
2015	36	10,440.0	1,332.83
2016	37	10,800.0	1,494.16
2017	37	10,590.0	2,140.00
2018	37	10,590.0	478.70
2019	37	10,590.0	335.70
Maximum:	37	12,626.0	2,403.22
Minimum:	22	8,037.1	139.15
Average:	30.0	9,474.4	1,097.91

There are two Future Use permits appropriating water from the Big Sioux: South aquifer. The full permitted volume authorized from these permits is utilized when estimating the annual volume usage. Both permits are maintained by the City of Brandon (No. 4002-3 at 685 ac-ft/yr and No. 6696-3 at 1,227.7 ac-ft/yr) to reserve a total of 1,912.7 ac-ft/yr of water.

There are numerous domestic wells on file with the Water Rights Program within the Big Sioux: South aquifer (Water Rights 2021b). Domestic users are not required to report their annual water usage and their low diversion rates are not considered a significant portion of the hydrologic budget. Additionally, some domestic wells may no longer be in use after development of rural water systems in the area.

Water Balance:

The Big Sioux: South aquifer estimated average annual withdrawal rate is 8,970 ac-ft/yr (non-irrigation: 5,959; irrigation: 1,098; future use: 1,913). Estimated average annual recharge is 16,742 ac-ft/yr. The annual pumping by this application is estimated at 232 ac-ft/yr by assuming a 12 inches per irrigated acre application rate. If approved, this results in a total of 9,202 ac-ft/yr of water. However, the actual amount of water utilized by this application will likely be less because the applicant specifies installing a subsurface drip irrigation system. With an estimated average annual recharge of 16,742 ac-ft/yr, this application does not result in an exceedance of the estimated average annual recharge for this aquifer. Therefore, there is reasonable probability unappropriated water is available for this application.

Observation Well Data

Administrative Rule of South Dakota Section 74:02:05:07 requires that the Water Management Board 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.

The DENR-Water Rights Program monitors 15 observation wells completed into the Big Sioux: South (Water Rights, 2021c). The hydrographs for the observation wells within approximately six miles of Water Permit Application No. 8491-3 are shown in Figures 2 through 5. The locations of the observation wells, in relation to the application location, is shown in Figure 6.

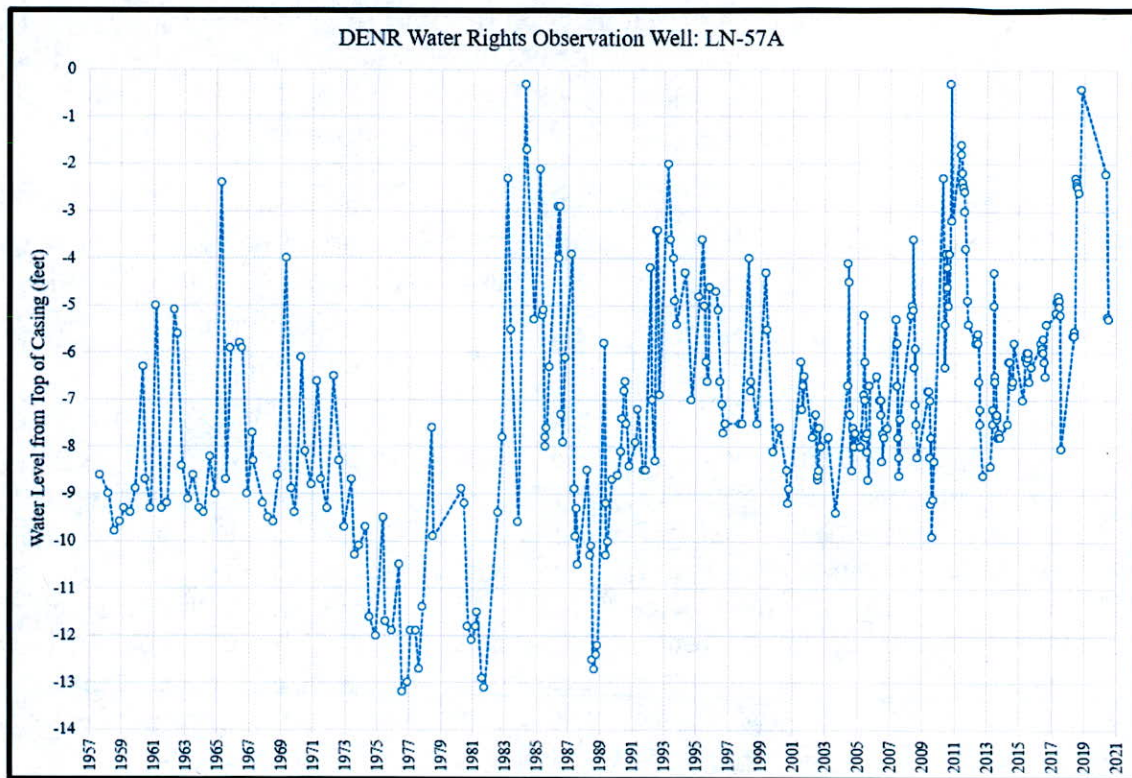


Figure 2. Hydrograph for observation well LN-57A located approximately 2.2 miles north of the proposed well location for Water Permit Application No. 8491-3 (Water Rights, 2021c).

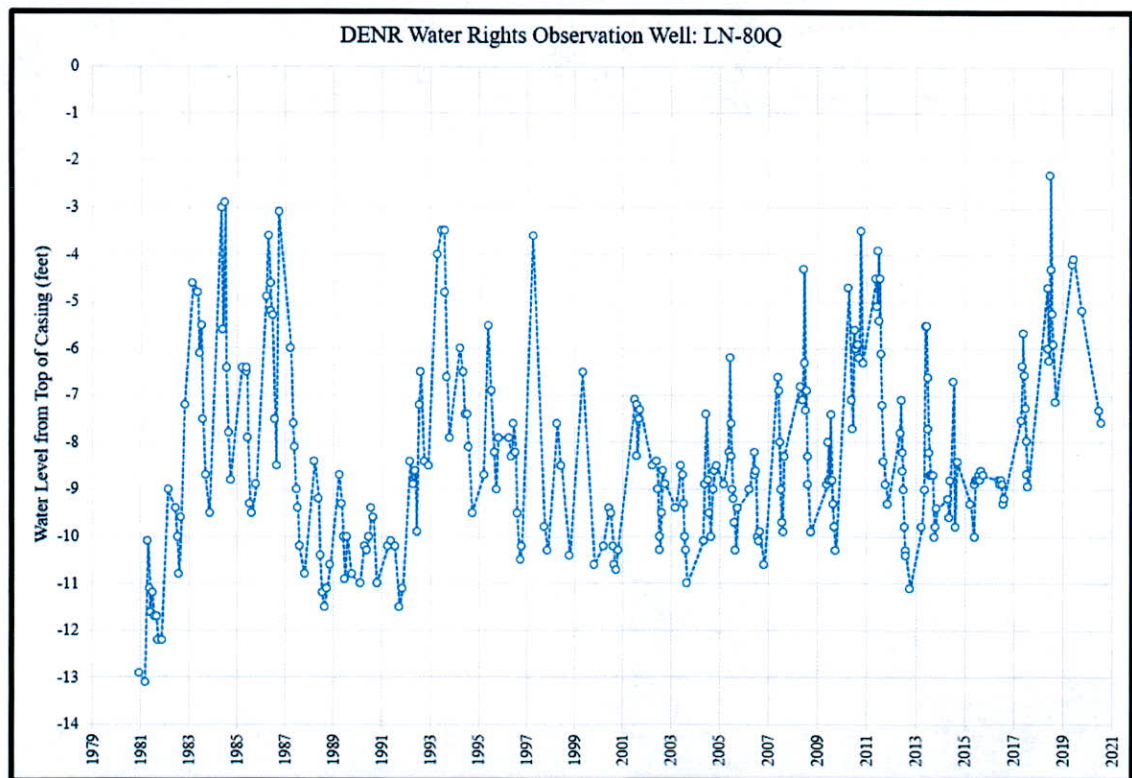


Figure 3. Hydrograph for observation well LN-80Q located approximately 0.8 miles southwest of the proposed well location for Water Permit Application No. 8491-3 (Water Rights, 2021c).

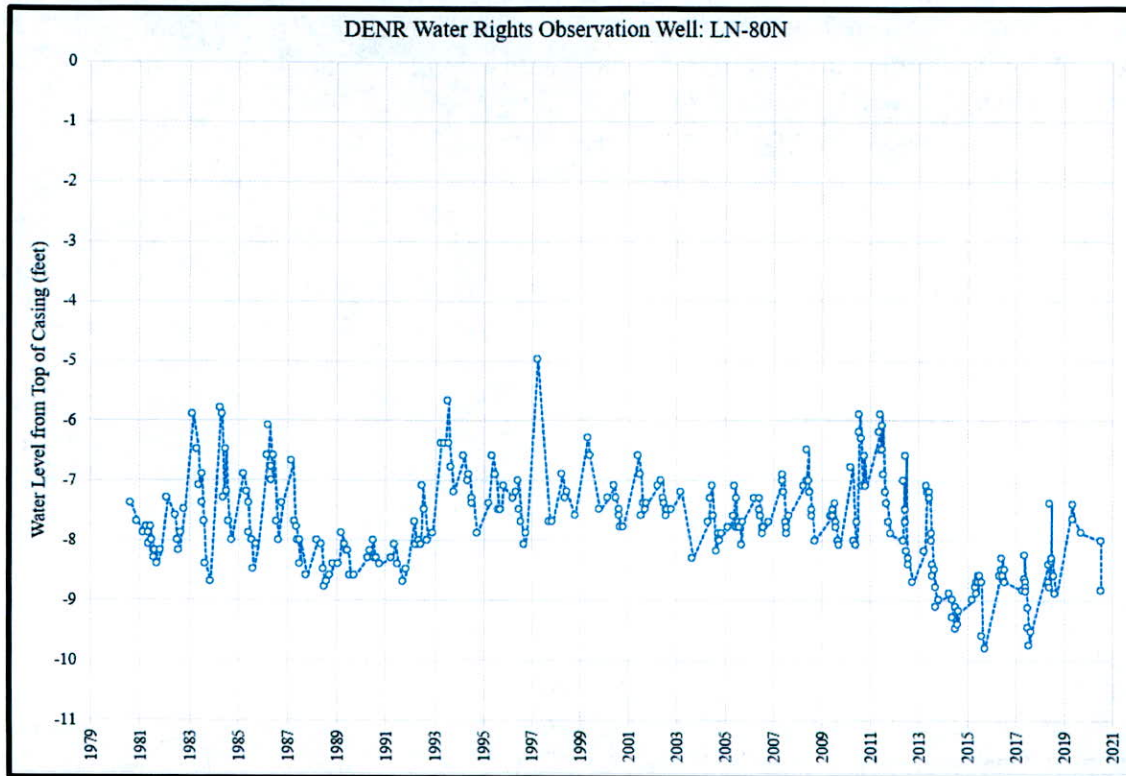


Figure 4. Hydrograph for observation well LN-80N located approximately 3.6 miles south of the proposed well location for Water Permit Application No. 8491-3 (Water Rights, 2021c).

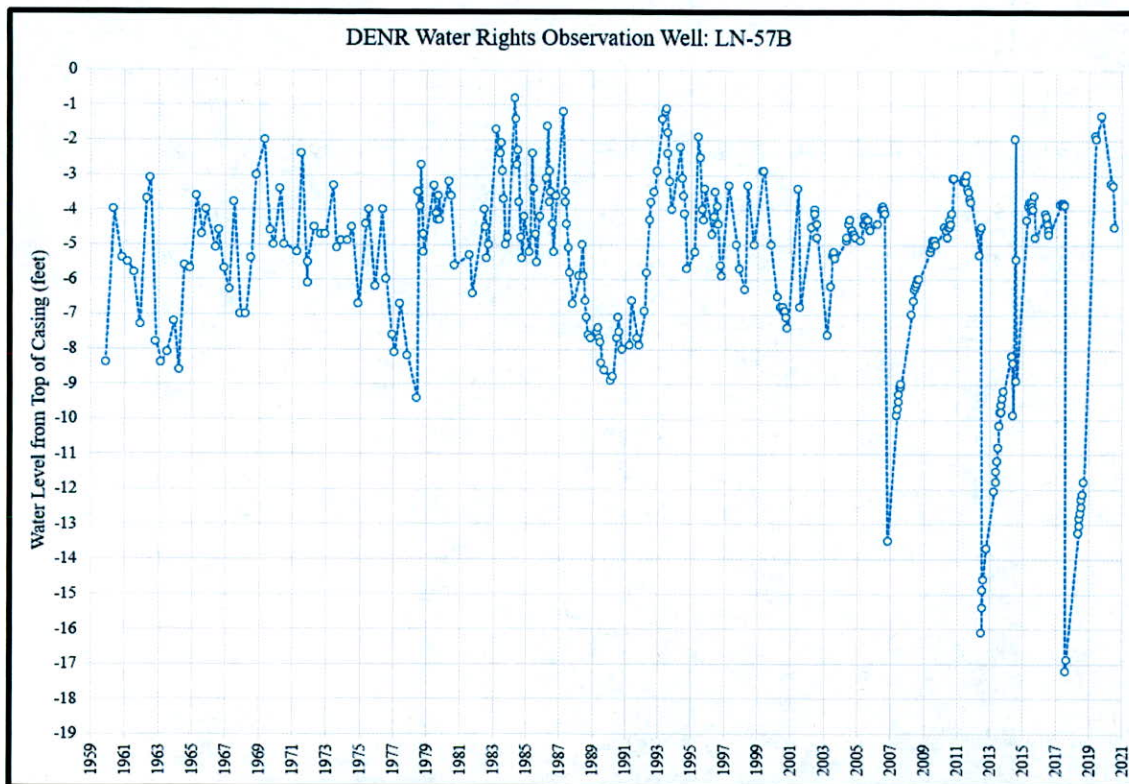


Figure 5. Hydrograph for observation well LN-57B located approximately 6.3 miles southwest of the proposed well location for Water Permit Application No. 8491-3 (Water Rights, 2021c).

The hydrographs shown in Figures 2 through 5 are representative of the hydrographs for other observation wells completed in the Big Sioux: South aquifer. It should be noted the significant downward spikes in water level starting in 2006 for LN-57B are a result of the well recovering poorly following development by Water Rights Program staff. Observation well LN-57B is slated for replacement in the near future. However, the water levels, once the well recovers from development, are representative of the aquifer. The hydrographs show the water level of the aquifer is relatively stable over the period of record. The hydrographs indicate that the aquifer responds well to climatic conditions with rising water levels during wet periods and declining water levels during drier periods. They also demonstrate that any drawdowns from pumping are temporary because the water levels typically recover to pre-pumping levels after the irrigation season. This recovery indicates that climatic conditions (the natural effects of recharge to and discharge from the aquifer) govern the long-term fluctuations in water level of aquifer rather than the impacts of pumping from the Big Sioux: South aquifer. Recognizing that recharge to and natural discharge from an aquifer can be captured for pumping, the hydrographs indicate that there is a reasonable probability that unappropriated water available in this aquifer unit.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS

Currently, there are 63 water rights/permits (23 non-irrigation, 38 irrigation, and 2 future use) appropriating water from the Big Sioux: South (Water Rights, 2021a). Table 3 lists the Big Sioux: South aquifer water rights/permits shown in Figure 6 within 7 miles of the proposed well locations for Application No. 8491-3.

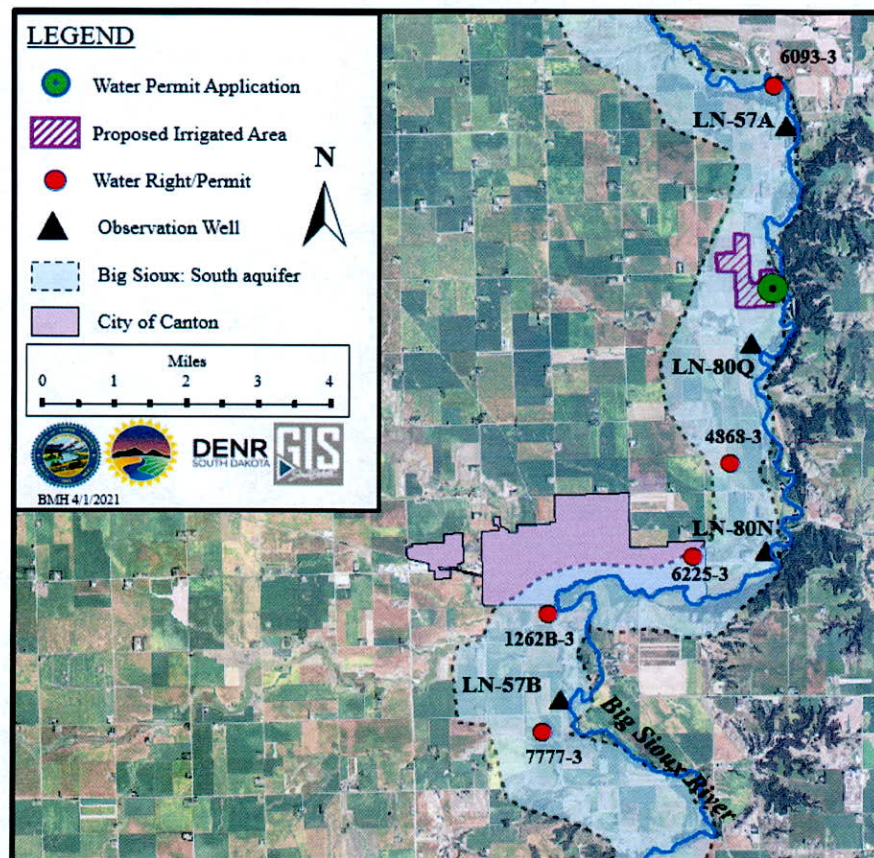


Figure 6. Existing Big Sioux: South aquifer water rights/permits and observation well in the vicinity of Water Permit Application No. 8491-3 (modified from Hedges, et al., 1982; Water Rights 2021a & 2021c).

Table 3. Water rights/permits shown in Figure 7 (Water Rights, 2021a).

Permit Number	Name	Use ^a	Status ^a	Rate (cfs)	Acres
1262B-3	CITY OF CANTON	MUN	LC	0.22	0
6093-3	LYON & SIOUX RWS INC	RWS	LC	1.33	0
4868-3	FRANK VAN DE KIEFT	IRR	LC	1.333	192
6225-3	HIAWATHA GOLF CLUB	IRR	LC	1.45	43
7777-3	ARLEN ZOMERMAAND	IRR	PE	3.78	287
a - MUN: Municipal; RWS: Rural Water System; IRR: Irrigation; LC: Licensed Water Right; PE: Permitted Water Right					

There are numerous domestic wells on file with the Water Rights Program within the vicinity of the proposed well site (Water Rights 2021b). To protect a domestic user with an adequate well, 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 Big Sioux: South aquifer is typically found under unconfined conditions. In an unconfined aquifer, drawdown from pumping is generally not significant far from the well. Therefore, unconfined conditions near the proposed well site will minimize potential well interference to existing wells from drawdown. Nevertheless, if this application is approved, the water permit should include a qualification that the well owner should control their withdrawals so there is not a reduction of needed water supplies for adequate domestic wells or for adequate wells having prior water rights. Additionally, even though there are high capacity wells in the Big Sioux: South aquifer, there has not been a history of well interference complaints due to pumping (Water Rights, 2021d). Users in the vicinity of the proposed application may also be using water provided by a rural water system.

When considering the unconfined nature of this aquifer, the saturated thickness of the aquifer in this area, the hydrographs of nearby observation wells not showing detrimental impact of pumping, and the lack of well interference complaints due to pumping, there is reasonable probability that the proposed diversion can be developed without unlawfully impairing existing appropriate or domestic water users with adequate wells.

CONCLUSIONS:

1. Water Permit Application No. 8491-3 proposes to appropriate water at a maximum instantaneous diversion rate of 2.56 cubic feet per second (cfs) from the Big Sioux: South aquifer. The applicant intends to divert water from up to four, less than 100 feet-deep, wells to be located in the E ½ NE ¼ Section 32 for irrigation of 232 acres located in the W ½ SE ¼, SE ¼ SW ¼ Section 29 and the NE ¼ Section 32; all in T99N-R48W. The site is located approximately 4.0 miles northeast of Canton, SD.

2. Based on the hydrologic budget and the observation well data, there is a reasonable probability unappropriated water is available for this proposed application.
3. There is a reasonable probability the diversions proposed by this application can be made without unlawfully impairing existing appropriative or domestic users with adequate wells.



Blaise Hansen
SD DENR – Water Rights Program



Adam Mathiowetz, PE
SD DENR-Water Rights Program

REFERENCES:

- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 1982. *Evaluation of Ground-water Resources in Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report.* U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J., Holly D.E., 1985, *Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge.* U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Niehus, C.A., 1994. *Water Resources of Lincoln and Union Counties, South Dakota.* USGS WRI Report 93-4195, United State Geological Survey, Rapid City, SD.
- Water Rights. 1979-2019a. *"Non-Irrigation Yearly Reports, 1979-2019"*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Water Rights. 1979-2019b. *"1979-2019 Irrigation Questionnaires"*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Water Rights. 2021a. *Water Right/Permit Files.* SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 2021b. *Well Completion Reports*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 2021c. *Observation Well Files*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 2021d. *Lincoln County Files*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Schlaak, Karen

From: Schlaak, Karen
Sent: Friday, April 16, 2021 10:53 AM
To: mikebarber@aglabexpress.com
Subject: Water Permit Application No. 8491-3
Attachments: 1067.pdf; OrderConf.pdf

Attached is a copy of the report, chief engineer 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 being mailed to you today.

The second document with the AD# should help you when contacting the Argus Leader.

Karen Schlaak

Water Rights Program
(605) 773-3352



Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF LINCOLN

RECEIVED

APR 23 2021

WATER RIGHTS
PROGRAM

TERESA ZOMER

being first duly sworn on his oath says; that the Sioux Valley News is a legal weekly newspaper of general circulation as required by South Dakota Code of Nineteen Hundred Thirty-Nine, and any acts amendatory thereto, printed and published by the Sioux Valley News, Inc., in Canton, in said county and State, and has been such legal newspaper during the time hereinafter mentioned; that he is and during all of said time was publisher of said newspaper and has personal knowledge of the facts stated in this affidavit; that the advertisement headed:

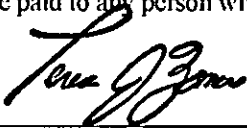
DENR

Notice of Application

a printed copy of which is hereto attached, was printed and published in said newspaper for ONE successive week(s) upon the following dates, to-wit:

April 22, 2021

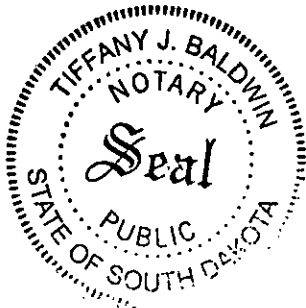
that the full amount of the fees charged for publishing the same to-wit: the sum of \$25.99 inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for any division of this sum has been made with any other person; and that no part of said sum has been agreed to be paid to any person whomsoever.



Ascribed and sworn to before me this 22nd day of April, 2021


Notary Public, South Dakota

(Seal)



My Commission Expires
January 12, 2024

NOTICE OF APPLICATION NO. 8491-3 to Appropriate Water

Notice is given that Mike Barber, 5501 S Sycamore Ave, Sioux Falls SD 57108 has filed an application for a water permit to appropriate 2.56 cubic feet of water per second from up to four wells to be completed into the Big Sioux/South Aquifer (less than 100 feet deep) located in the E 1/2 NE 1/4 Section 32 for irrigation of 232 acres located in the W 1/2 SE 1/4, SE 1/4 SW 1/4 Section 29 and the NE 1/4 Section 32; all in T99N-R48W. This site is located approximately 4 miles northeast of Canton SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8491-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.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 or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must

file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 3, 2021.

The petition may be informal but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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 in the Sioux Valley News on April 22, 2021 at the total approximate cost of \$25.99.

RECEIVED

MAY 03 2021

WATER RIGHTS
PROGRAM

Argus Leader

P.O. Box 677349, Dallas, TX 75267-7349

WATER RIGHTS PROGRAM
523 E CAPITOL JOE FOSS BLDG
PIERRE, SD 57501

Account No.: SFA-078306

Ad No.: 0004694274

PO #: NO. 8491-3

Lines : 104

Ad Total: \$68.91

This is not an invoice

of Affidavits 1

Account No.: SFA-078306
Ad No.: 0004694274

Argus Leader AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA

I being duly sworn, says: That The Argus Leader is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-21, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

Thursday, April 22, 2021

Sworn to and subscribed before me this 22 day of April, 2021.

Amy Kalkott
Legal Clerk

Vicky Felty
Notary Public, State of Wisconsin, County of Brown

979-21
My Commission expires

VICKY FELTY
Notary Public
State of Wisconsin

NOTICE OF APPLICATION NO. 8491-3 to Appropriate Water

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Pursuant to SDCL 45-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8491-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, of the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3359)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 3, 2021.

The petition may be informal but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel. If legal counsel is obtained.

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 \$68.91.
467474 Apr. 27, 2021

Schlaak, Karen

From: Schlaak, Karen
Sent: Friday, April 16, 2021 8:42 AM
To: 'legals@argusleader.com'
Subject: 8491-3, Mike Barber
Attachments: 8491-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 22, 2021.

Mike Barber, 5501 S Sycamore Ave, Sioux Falls SD 57108 (605 370-3866) 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, Pierre SD 57501.

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

Karen Schlaak

Water Rights Program
(605) 773-3352



Schlaak, Karen

From: Schlaak, Karen
Sent: Friday, April 16, 2021 8:40 AM
To: svn@siouxvalleynewsonline.com
Subject: 8491-3, Mike Barber
Attachments: 8491-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 22, 2021.

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

Karen Schlaak

Water Rights Program
(605) 773-3352





DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

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

April 16, 2021

Mike Barber
5501 S Sycamore Ave
Sioux Falls SD 57108

Dear Mr. Barber:

Water Permit Application No. 8491-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Sioux Valley News printed at Canton SD (Ph # 605 764-2000) and the Argus Leader printed at Sioux Falls SD (Ph # 605 331-2200). 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,

Karen Schlaak

Karen Schlaak
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. 8491-3 to Appropriate Water

Notice is given that Mike Barber, 5501 S Sycamore Ave, Sioux Falls SD 57108 has filed an application for a water permit to appropriate 2.56 cubic feet of water per second from up to four wells to be completed into the Big Sioux:South Aquifer (less than 100 feet deep) located in the E 1/2 NE 1/4 Section 32 for irrigation of 232 acres located in the W 1/2 SE 1/4, SE 1/4 SW 1/4 Section 29 and the NE 1/4 Section 32; all in T99N-R48W. This site is located approximately 4 miles northeast of Canton SD.

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Published once at the total approximate cost of _



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

MAY 12 2021

Mike Barber
5501 S Sycamore Ave
Sioux Falls SD 57108

Dear Mr. Barber:

Enclosed is Water Permit No. 8491-3 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

8491-3

SD EForm - 1621LD V1

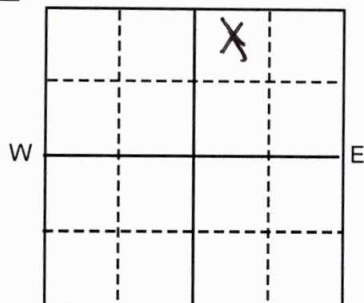
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW ¼ NE ¼ Sec 32 Twp 99 Rg 48

County Lincoln

North

Please mark well
location with an "X"

Well Completion Date

June 21, 2021

← 1 Mile →

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?

600.0 ft. from GRAVEL PIT (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

MUD ROTARY

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	0.0 FT	20.0 FT	17.50 IN
LB/FT	12.00 IN	20.0 FT	86.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
BENTONITE	21	Lb/gal	0.0 Ft	84.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

TREMIE PIPED

SCREEN:

☐ Perforated pipe ☒ Manufactured

Diameter 12.00 Inches Length 20.0 Feet

Material STAINLESS STEEL

Slot Size .060 Set From 86.0 Feet to 106.0 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?

☒ No, Why Not?

Lab to which water

quality sample sent for analysis

IRRIGATION WELL ONLY

Well Owner: BARBER FARMS

Business Name: C/O MIKE BARBER

Address: 5501 SOUTH SYCAMORE AVE

City, State, Zip: SIOUX FALLS SD 57108

WELL LOG:

DEPTH

FORMATION

FROM

TO

SEE ATTACHED LOG

STATIC WATER LEVEL

31.0 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:

☐ Bailed

☐ Other

Pumping Level Below Land Surface

67.0 Ft. After 4.0 Hrs. pumped 400.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

GPS N 43 21.5160 W 96 32.2280

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

Drilling firm: THEIN WELL COMPANY, INC

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

RECEIVED

AUG 09 2021

WATER RIGHTS
PROGRAM

Date:

Barber Farms 12" Irrigation Well Formation Log

<i>Formation log</i>	<i>From</i>	<i>To</i>
Top Soil	0	5
Clay dark brown	5	10
Sand	10	13
Gravel few thin layers of gray clay- Rock at 20', 26' and 33'	13	38
Sand medium some gravel	38	49
Clay gray / tan	49	57
Coarse gravel clay	57	60
Clay gray w/ gravel and sand layers soft and sandy	60	72
Clay gray sandy	72	76
Sand	76	78
Clay gray	78	85
Sand med a few thin clay layers coarse on bottom	85	105
Shale	105	110

Barber Farms Canton SD

Legend

 Feature 1

278th St

Test Hole # 1

Barber Farms 106' 12" Irrigation Well

Google Earth

© 2021 Google

800 ft



8491-3



DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 20, 2022

NOTICE

TO: MIKE BARBER, 5501 S SYCAMORE AVE, SIOUX FALLS, SD 57108

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2021 Irrigation Questionnaire(s)

Our records indicate your 2021 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 8491-3. The request for the Questionnaire was dated October 22, 2021. The Water Management Board has directed that owners of water permits who have not submitted the 2021 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 8491-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 2, 2022 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 8491-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 2, 2022** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: WQTYKN**

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

February 7, 2022

8491-3

Mike Barber
5501 Sycamore Ave
Sioux Falls SD 57108

Dear Mr. Barber:

I am writing to acknowledge receipt of your 2021 irrigation questionnaire.

You may disregard the January 20, 2022, "Notice" concerning reporting requirements for Water Permit No. 8491-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

September 26, 2024

8491-3

Mike Barber
5501 S Sycamore Ave
Sioux Falls SD 57108

Dear Mr. Barber:

On August 28, 2024, a staff engineer from the Water Rights Program made a site visit to conduct an inspection of the water use system authorized under Permit No. 8491-3 for irrigation of acres located in portions of Sections 29 & 29 & 32, T99N-R48W.

With the inspection having been conducted and the report completed, we are ready to proceed with the licensing of your water use system. However, as stated in Permit No. 8491-3, you have until May 3, 2026, to complete the construction of your water use system and until May 3, 2030, to put that water to beneficial use.

If you have finished construction and are satisfied with your water use system, please complete the highlighted portions of the enclosed "Notice of Completion of Works" form and return it in the postage paid envelope. Once we have this completed for back from you, we will proceed with the licensing of your system.

If you have any questions, I'd be happy to help.

Sincerely,

Amanda Dewell
Permitting Administrator
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

enclosure

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8491-3

I have this day, August 28, 2024, made a thorough examination of the water use system constructed by Mike Barber, 5501 S Sycamore Ave, Sioux Falls, SD 57108 of Permit No. 8491-3, bearing the priority of February 19, 2021 authorizing the diversion of 2.56 cu. ft. per second of the waters of Big Sioux: South Aquifer for irrigation purposes, in Lincoln County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Thein Well Co
- 2) No. of Wells 1
- 3) Depth(s) 106 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 12 inches
- 2) Length 86 feet
- 3) Type Plastic

Motor:

- 1) Make Unknown
- 2) Model No. Unknown
- 3) Horsepower rating Unknown hp

Screen:

- 1) Type Stainless Steel
- 2) Length 20 feet
- 3) Static water level 31 feet

Pump:

- 1) Make Submersible
- 2) Model Unknown
- 3) Size Unknown
- 4) Capacity 400 GPM

B. Works used to transport water to place of use:

- 1) Type Buried lateral & drip PVC & PE lines
- 2) Size various inches
- 3) Length various feet

Comments: The distribution lines radiate from the well near the center of the irrigated area

C. Works used to apply water to beneficial use: Buried Drip lines

Chemigation Equipment:

- 1) Does chemigate Y

Comments: Using commercially available injection equipment

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y
- 3) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: **WELL LOCATION**
From the NW corner Sec 32 T99N R48W, 30 ft S & 3300 ft E, Lat 43.35861 Long -96.53712(NW 1/4 NE 1/4)
2. The works are capable of diverting and conveying to the place of use **0.89** cu. ft. per second of water which is to be used for **irrigation**. Water has been put to beneficial use to the maximum extent as follows:

legal description/acreage

Land in Sec 29 T99N R48W

NW 1/4 SE 1/4 - 30 acres

SW 1/4 SE 1/4 - 30 acres

SE 1/4 SW 1/4 - 40 acres

Land in Sec 32 T99N R48W

NW 1/4 NE 1/4 - 32 acres

NE 1/4 NE 1/4 - 24 acres

SE 1/4 NE 1/4 - 36 acres

SW 1/4 NE 1/4 - 40 acres

comprising a total of **232** acres of land and the license should be issued for **0.89** cfs.

3. All structures, wells and lands on map **Y**

F. Comments or other permit(s) associated with the project:

FSA maps and the ArcGIS program were used to construct the attached well location and irrigated area map.

The reported system discharge in the 2023 Irrigation Questionnaire was used to establish the system capacity in this report.

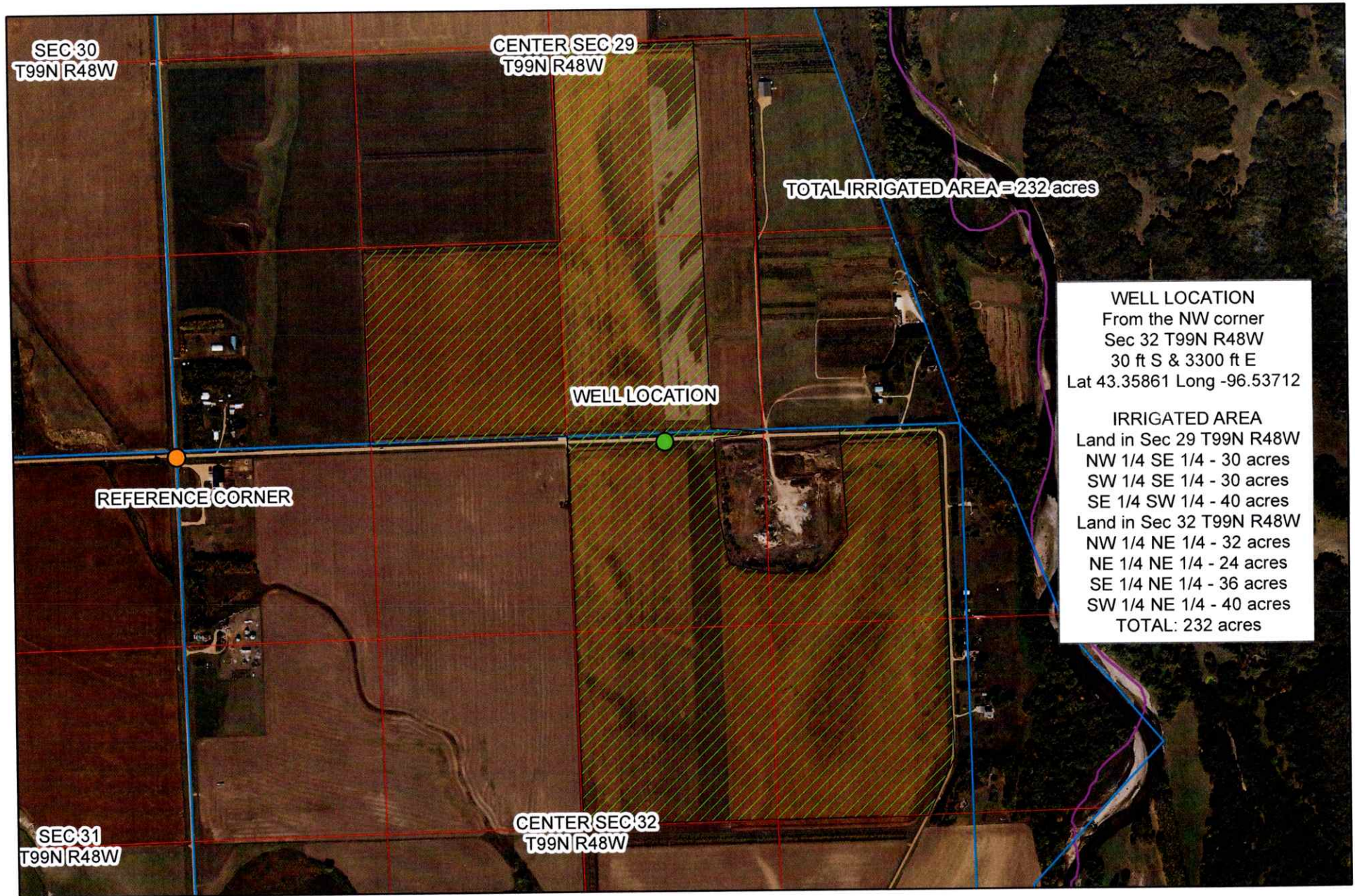
I talked to Mr. Mike Barber (605/370-3866), farm operator, on the phone regarding Water Permit information.

The address and phone number in the permit application materials are current.



Darrell DeBoer
Water Rights Inspector
DENR, Water Rights Program

Date report completed: **August 30, 2024**



WELL LOCATION
 From the NW corner
 Sec 32 T99N R48W
 30 ft S & 3300 ft E
 Lat 43.35861 Long -96.53712

IRRIGATED AREA
 Land in Sec 29 T99N R48W
 NW 1/4 SE 1/4 - 30 acres
 SW 1/4 SE 1/4 - 30 acres
 SE 1/4 SW 1/4 - 40 acres
 Land in Sec 32 T99N R48W
 NW 1/4 NE 1/4 - 32 acres
 NE 1/4 NE 1/4 - 24 acres
 SE 1/4 NE 1/4 - 36 acres
 SW 1/4 NE 1/4 - 40 acres
TOTAL: 232 acres



0 700 1,400 2,800 4,200 5,600 Feet



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

TO: Water Rights Program, DANR
523 E. Capitol Ave.
Pierre, SD 57501-3182
or via email to DANRmail@state.sd.us

Date 10-5-2024

FROM: Mike Barber 605-370-3866
(name) (phone)
5501 S. Sycamore Ave mikebarber@aglabexpress.com
(address) (email)
Sioux falls, SD, 57108
(city, state, zip)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 8491-3 states that the water use system is to be constructed by

May 3, 2026, and water is to be put to beneficial use by May 3, 2030.
(date) (date)

The water use system was completed on 5-1-2024
(date)

Applying the water to beneficial use was completed on 5-1-2024
(date)

You may schedule an inspection so that the water license may be issued.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

OCT 23 2024

8491-3

Mike Barber
5501 S Sycamore Ave
Sioux Falls SD 57108

Dear Mr. Barber:

Enclosed is Water License No. 8491-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if in the future, the owner of an existing well, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

So long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

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

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8491-3**

(1) Mike Barber, 5501 S Sycamore Ave, Sioux Falls SD 57108, made Application No. 8491-3, February 19, 2021, for a water permit to divert 2.56 cubic feet of water per second from groundwater (Big Sioux: South Aquifer), Lincoln County, South Dakota for irrigation purposes. Permit No. 8491-3, with a priority date of February 19, 2021, was approved May 3, 2021, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 3, 2026, and for the application to beneficial use of water on or before May 3, 2030.

The permit holder submitted a Notice of Completion of Works and Application of Water to Beneficial Use form on October 5, 2024. The Notice stated the diversion system was completed and the water was placed to beneficial use on May 1, 2024.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.89 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 30 ft S & 3,300 ft E of the NW corner Section 32, T99N, R48W (NW $\frac{1}{4}$ NE $\frac{1}{4}$)
(Latitude 43.35861 & Longitude -96.53712)

(3) The amount of 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.

(4) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate to following land: *all in T99N-R48W*

Section 29		Section 32	
NW $\frac{1}{4}$ SE $\frac{1}{4}$	30 acres	NE $\frac{1}{4}$ NE $\frac{1}{4}$	24 acres
SW $\frac{1}{4}$ SE $\frac{1}{4}$	30 acres	NW $\frac{1}{4}$ NE $\frac{1}{4}$	32 acres
SE $\frac{1}{4}$ SE $\frac{1}{4}$	40 acres	SW $\frac{1}{4}$ NE $\frac{1}{4}$	40 acres
		SE $\frac{1}{4}$ NE $\frac{1}{4}$	36 acres

TOTAL: 232 acres

(5) Pursuant to South Dakota Water Law 46-5-30.1 Mike Barber, the holder and/or owner of Water Right No. 8491-3 is issued a license to appropriate water, the right to use 0.89 cubic feet of water per second from groundwater, one well (Big Sioux: South Aquifer), with a priority date of February 19, 2021, from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8491-3 and subject to the following qualifications:

1. The well approved under Water Permit No. 8491-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

continued

2. The well authorized by Permit No. 8491-3 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. *(The well was drilled in 2021 by Thein Well Company Inc. A copy of the well completion report is on file with the Water Rights Program.)*
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Eric Gronlund

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

OCT 23 2024

date

