

WATER PERMIT NO. 8518-3

Name of Applicant: **Bryce Sombke**

Address: **40746 144th St, Conde SDs 57434**

Phone: **605 290-6283**

Amount of Water Claimed: **0.033 cfs**

Total Acres: **NA**

Source of Water Supply: **groundwater (one well)**

Water to be used for: **recreation and FWP**

County: **Brown**

Type of Waste Disposal System:

Location: **10 miles south of Groton SD**

PRIORITY

Date Received: **6-9-21**

Application/License Fee: **\$ 300**

Corrected Application Received:

Period of Annual Use: **January 1 – December 31**

Remarks: **supply a fishing and recreation pond**

Diversion Point: **SW 1/4 SE 1/4 Sec 8-T121N-R60W**

Land to be Irrigated: **NA**

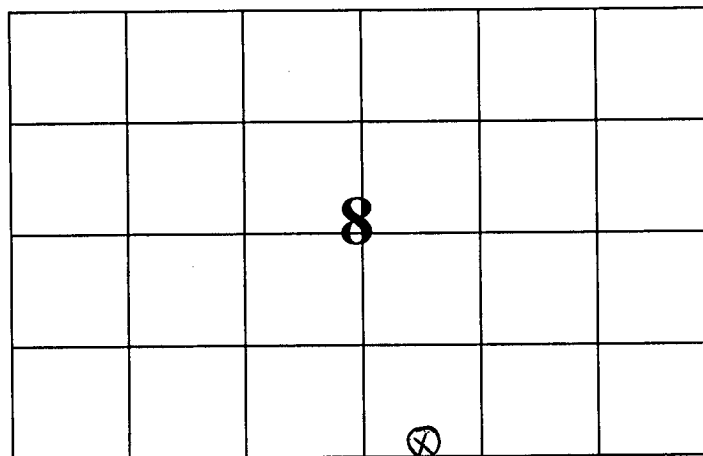
Depth of Well: **1160 feet deep**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by:



Reviewed and the Number Assigned on: **6-9-21**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8518-3**

Date of first receipt of application June 9, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8518-3 to Bryce Sombke, 40746 144th St, Conde SD 57434 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. 8518-3 appropriates 3.1 acre-feet of water annually at a maximum pump rate of 0.033 cubic feet of water per second from one well completed into the Dakota Aquifer (1,128 feet deep) located in the SW 1/4 SE 1/4 Section 8-T121N-R60W. The permit holder is authorized to pump from the well to maintain the water level in a small pond for recreational and fish and wildlife propagation purposes. This site is located approximately 10 miles south of Groton SD.
2. The water appropriated shall be used for the purpose of recreation and fish and wildlife propagation and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date from which applicant may claim right is June 9, 2021.
5. The date of approval of Permit No. 8518-3 is August 9, 2021.
6. One-fifth of the construction is to be completed on or before February 9, 2024.
7. All construction is to be completed on or before August 9, 2026.
8. Water is to be put to beneficial use on or before August 9, 2030.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8518-3 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 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 well approved under this permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used. If the well is abandoned or the permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.
3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.
4. Water Permit No. 8518-3 authorizes a total annual diversion of 3.1 acre-feet of water from the Dakota aquifer.
5. Any future replacement well shall meet the adequate well construction standard as defined in Administrative Rule of South Dakota (ARSD) 74:02:04:20. Replacement wells may not be constructed using the alternative construction requirements that are allowed for domestic use wells outlined in ARSD 74:02:04:35.

WATER MANAGEMENT BOARD

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

AUG 17 2021
date



RECEIVED
JUN 09 2021

PAID

JUN 9 2021

Ck# 2826

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8518-3</u>	(office use only) Hydrologic Unit <u>10160006</u>	WATER RIGHTS PROGRAM
	Basin <u>James River</u>		
	Newspaper <u>American News</u>		

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Water Distribution System	☒ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☒ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other _____	

Type of Application: (check one)

☒ New	☐ Vested Right (Use predates Mar 2, 1955)	☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____		
☐ Amendment/Correction to Permit No. _____		

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

NA

- Name to Appear on Water Permit Bryce Sombke
Mailing Address 40746 144th St Conde SD 57434
(Address) (City) (State) (Zip Code)
Phone (605) 290-6283 Mobile _____ Email brycecrk@live.com
- Amount of water claimed 0.033 *CFS or 15 **GPM and 3.1 ***AF or 1,000,000 Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use
- Source of water supply Artesian Well
- Location of point of diversion _____ County Brown
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ No
If "Yes," where will water be used? SW 1/4 SE 1/4 Section 8 T12N-R60W
(example - NW1/4 section 12-T104N-R53W)
- County or counties where water will be used Brown
- Annual period during which water is to be used Year round for water level maintenance with reduced flow when at capacity
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Private Fishing/Recreational pond, Also a constant source of water for wildlife.

I, Bryce Sombke owner, 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 1 Have test holes been drilled ☐ Yes ☒ No Drilled by Stretch's Well Service
(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:

c) Well Depth (required) 1160 ft Depth to Top of Water Bearing Material Depth to Water from Surface

d) Distance to nearest domestic well on applicant's property 4 + miles Property owned by others Scott Feller

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) 1,000 Year Constructed 2015

c) Connected to the City of NA Sanitary System *Nearest wastewater is 700 feet from well

3. Dugout Information

a) Surface Dimensions 330' x 160' Depth Variable (4'-14')

b) Depth to water (ground surface to water level) Variable Depth / Average 7 feet

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 NA

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)

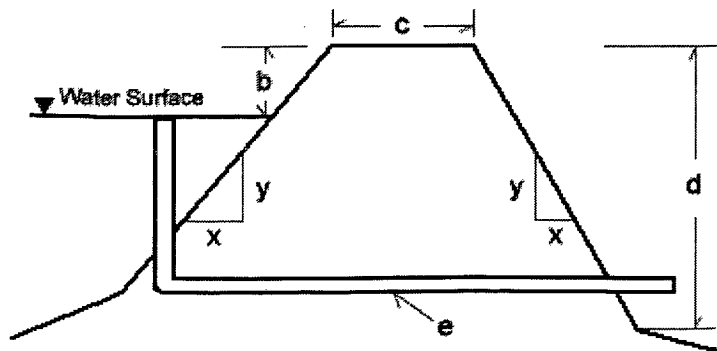
Upstream

Downstream

h) Surface Area of Impoundment

i) Storage Acre Feet

j) Drainage Area Above Dam Acres

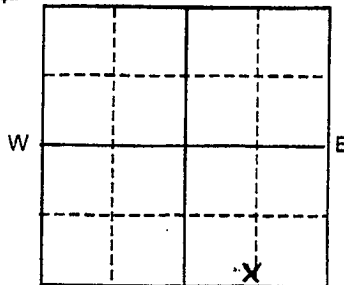


SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location 1/4 SE 1/4 Sec 8 Twp 121 N Rg 60 WCounty Brown

Please mark well location with an "X"



Well Completion Date

5-18-21

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
NONE ft. from (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
<u>200</u> LB/FT	<u>5</u> IN	<u>0</u> FT	<u>198</u> FT	<u>7 7/8</u> IN
<u>5480</u> LB/FT	<u>2</u> IN	<u>198</u> FT	<u>1128</u> FT	<u>4 1/2</u> IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
		Lb/gal	Ft	Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 2 Inches Length 250 FeetMaterial PVCSlot Size 1025 Set From 878 Feet to 1128 Feet

Other information

WAS A PACKER OR SEAL USED? ☒ Yes ☐ NoIf so, what material? RubberDescribe packer(s) and location above the slotted

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorine
☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: Brian SombkeBusiness Name: Coteau View Hunts + KennelsAddress: 40746 144th StCity, State, Zip: Conde SD 57434

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>yellow clay</u>	<u>0</u>	<u>10</u>
<u>blue clay</u>	<u>10</u>	<u>20</u>
<u>shale</u>	<u>20</u>	<u>885</u>
<u>Dakota</u>	<u>885</u>	<u>1128</u>

STATIC WATER LEVEL

If flowing: closed in pressure 5 FEET PSIGPM flow 15 through 2" Inch pipeControlled by ☒ Valve ☐ Reducers ☐ Other

Reduced flow rate GPM

Can well be completely shut in? yes

WELL TEST DATA:

☒ Pumped Describe: Air☐ Bailed☐ Other

Pumping Level Below Land Surface

10 Ft. After 60 Hrs. pumped GPM Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

This well was drilled under license # 722 and this report is true and accurate.Drilling firm: Stretch's Well Service Inc

Signature of License Representative:

Tom Bratton

Signature of Well Owner or Equitable Property Holder:

Brian SombkeDate: 05/24/2021

RECEIVED

MAY 26 2021

WATER RIGHTS PROGRAM

Google Maps



Imagery ©2021 Google, Map data ©2021 500 ft

Google Maps



Imagery ©2021 Google, Map data ©2021 200 ft



121N 60W
Section: 06



121N 60W
Section: 05



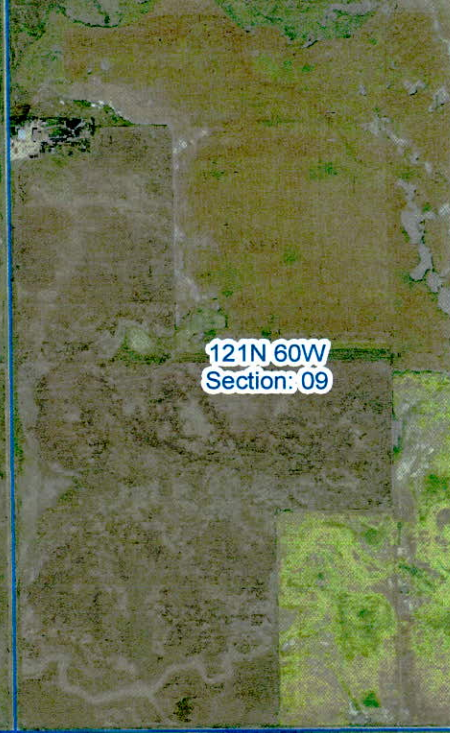
121N 60W
Section: 04



121N 60W
Section: 07



121N 60W
Section: 08



121N 60W
Section: 09



121N 60W
Section: 18



121N 60W
Section: 17



121N 60W
Section: 16

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date June 9, 2021

RECEIVED OF Coteau View Hunts and Kennels LLC 40746 144th St Conde SD 57434

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

Fee for Application for Permit No. <u>8518-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>100.00</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>8518-3</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>300.00</u>

By Eric Gronlund
Chief Engineer
VM



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

June 3, 2021

Coteau View Hunts & Kennels
Bryon Sombke
40746 144th St
Conde SD 57434

Dear Mr. Sombke

I am writing in regard to a well completion report filed by Stretch's Well Service Inc. The report shows a new well was completed for you on May 18, 2021. Based on the information in the report, you may need a water permit for this water use.

1. According to state law, a water permit is needed for any water use except for reasonable, private domestic use. Examples of commercial uses that require a water rights permit are: truckstops; motels; restaurants; bars; clubs; tourist attractions; campgrounds or any other business operation.
2. Also, as a new well owner, you need to be aware of some of your responsibilities. Enclosed is a copy of "Well Owner Responsibilities". Please review these responsibilities to ensure you are complying with all of the requirements.

Enclosed are an application form and instruction sheet to apply for a water permit. The completed form with the application fee and map can be returned to: Water Rights Program, 523 E. Capitol, Pierre, SD 57501. Please respond by July 1, 2021.

If you believe your water use does not require a water permit or that you have an existing permit, or if help is needed completing the application forms, please contact Ron Duvall or me at (605) 773-3352. We will be happy to assist you in any way possible.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
karen.schlaak@state.sd.us

enclosure



**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. 8518-3, Bryce Sombke**

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. 8518-3, Bryce Sombke, 40746 144th St, Conde SD 57434.

The Chief Engineer is recommending APPROVAL of Application No. 8518-3 because 1) unappropriated water is available, 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 well approved under Water Permit No. 8518-3 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 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 well approved under this permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used. If the well is abandoned or the permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.
3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.
4. Water Permit No. 8518-3 authorizes a total annual diversion of 3.1 acre-feet of water from the Dakota aquifer.
5. Any future replacement well shall meet the adequate well construction standard as defined in Administrative Rule of South Dakota (ARSD) 74:02:04:20. Replacement wells may not be constructed using the alternative construction requirements that are allowed for domestic use wells outlined in ARSD 74:02:04:35.

See report on application for additional information.

Eric Gronlund, Chief Engineer
July 19, 2021

Report to the Chief Engineer
On Water Permit Application No. 8518-3

Bryce Sombke

July 19, 2021

Water Permit Application No. 8518-3 proposes to appropriate up to 3.1 acre-feet of water annually at a maximum instantaneous diversion rate of 0.033 cubic feet of water per second (cfs) (15 gallons per minute (GPM)) from one well (1,128 feet deep) completed into the Dakota aquifer and located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 8-T121N-R60W. The applicant is requesting to pump from the well to maintain the water level in a small pond for recreational and fish and wildlife propagation use. This site is in Brown County approximately ten miles south of Groton, South Dakota.

AQUIFER: Dakota (DKOT)

HYDROGEOLOGY:

The Cretaceous-Aged, Dakota Formation is defined as the first relatively continuous sandstone below the Greenhorn Limestone and it extends downward to the top of the Skull Creek Shale in western and central South Dakota (Schoon, 1971). In eastern South Dakota, the Skull Creek Shale is not continuous and when absent, the Dakota Formation directly overlies Precambrian bedrock or the Inyan Kara Group (Schoon, 1971). In western South Dakota, a stratigraphically equivalent formation to the Dakota Formation is the Newcastle Formation, which has outcrops in the Black Hills (Bredehoeft, et al., 1983). In South Dakota, the Dakota Formation has been subdivided into three units (Schoon, 1971). The upper unit consists of light brown to reddish-brown, fine to medium grained, friable sandstone, interbedded with gray to dark gray shale. Thin, discontinuous beds of lignite are present in the lower part of the upper unit. The middle unit consists of a gray silty clay with small siderite pellets disseminated throughout. The lower unit consists of medium to coarse grained sandstone (Schoon, 1971). The Dakota Formation underlies all of Brown County and is characteristically a fine-grained sandstone containing numerous shale lenses varying in color from white to gray, yellow, and red (Leap, 1986). In Brown County, the thickness of the Dakota Formation ranges from approximately 200 to 300 feet, with a documented maximum thickness of 330 feet (Leap, 1986).

The Dakota aquifer is comprised of the porous and permeable portions of the Dakota Formation and is primarily a confined bedrock aquifer throughout most of South Dakota (Schoon, 1971; Water Rights 2021b and 2021d). Schoon (1971) estimated the Dakota Formation underlies 66,500 square miles of South Dakota and has an average thickness of 150 feet. A conservative estimate of the amount of water stored in the Dakota aquifer can be calculated by assuming 15% porosity for the Dakota Formation (Schoon, 1971), multiplied by the average thickness (150 ft), then multiplied by the areal extent (66,500 sq. miles or 42.5 million acres) of the aquifer, to compute approximately 960 million acre-ft of stored water in South Dakota. In Brown County, Hedges and others (1982) estimated the Dakota aquifer to underly approximately 1,750 square miles, or 1,120,000 acres, and to contain approximately 25,200,000 acre-feet of recoverable

water in storage. The depth to the Dakota aquifer in Brown County ranges from approximately 850 to 1,100 feet below the ground surface (Koch and Bradford, 1976).

A water well completion report was submitted with Water Permit Application No. 8518-3 for an existing well (1,128 feet deep) completed into the Dakota aquifer. The well completion report lists “Yellow Clay” from 0 to 10 feet below the ground surface, “Blue Clay” from 10 to 20 feet, “Shale” from 20 to 885 feet, and “Dakota” from 885 to 1,128 feet below the ground surface (Water Rights, 2021d). The well was screened in sandstone from 878 to 1,128 feet below the ground surface and was flowing 15 GPM through a 2-inch pipe at the time of completion (May 18, 2021) (Water Rights, 2021d). Based on the submitted well completion report and lithologic logs on file for nearby observation wells, the Dakota aquifer is under confined conditions near the well the applicant proposes to use (SDGS, 2021; 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 rights, and that the proposed use is a beneficial use and in the public interest.” This report will address the availability of unappropriated water and the potential for unlawful impairment of existing water rights within the Dakota aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8518-3 proposes to appropriate water from the Dakota 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 Dakota aquifer is older than and stratigraphically lower than the Greenhorn Formation; however, 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 Dakota 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.

The DANR-Water Rights Program monitors 46 observation wells completed into the Dakota aquifer (Water Rights, 2021b). These observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The three closest observation wells to the well the applicant proposes to use are ED-85A (approximately 33 miles northwest), HD-87A (approximately 76 miles southwest), and AU-89A (approximately 119 miles southwest) (as shown in Figure 1). The hydrographs for these observation wells are displayed in Figures 2 to 4 (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.

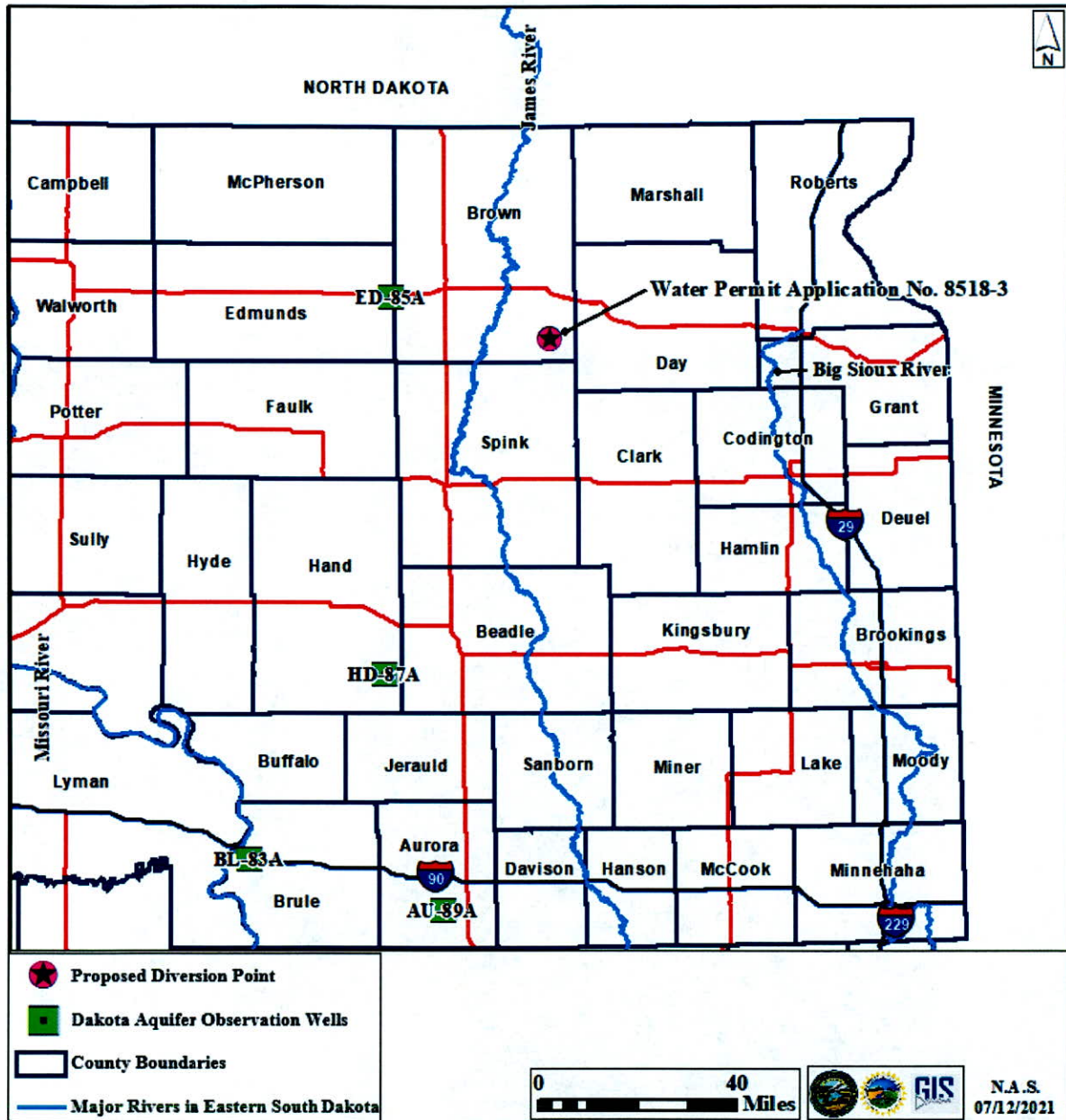


Figure 1. Location of the well the applicant proposes to use for Water Permit Application No. 8518-3 with the Dakota aquifer observation wells used in this analysis (Water Rights, 2021b)

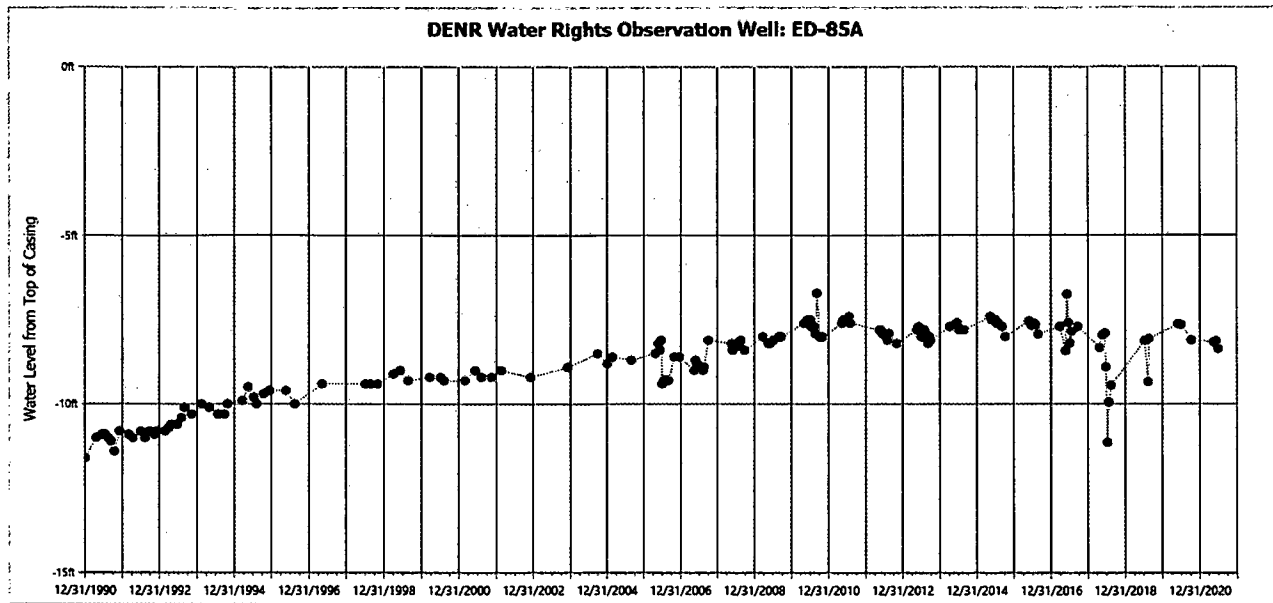


Figure 2. Hydrograph for observation well ED-85A (Water Rights, 2021b)

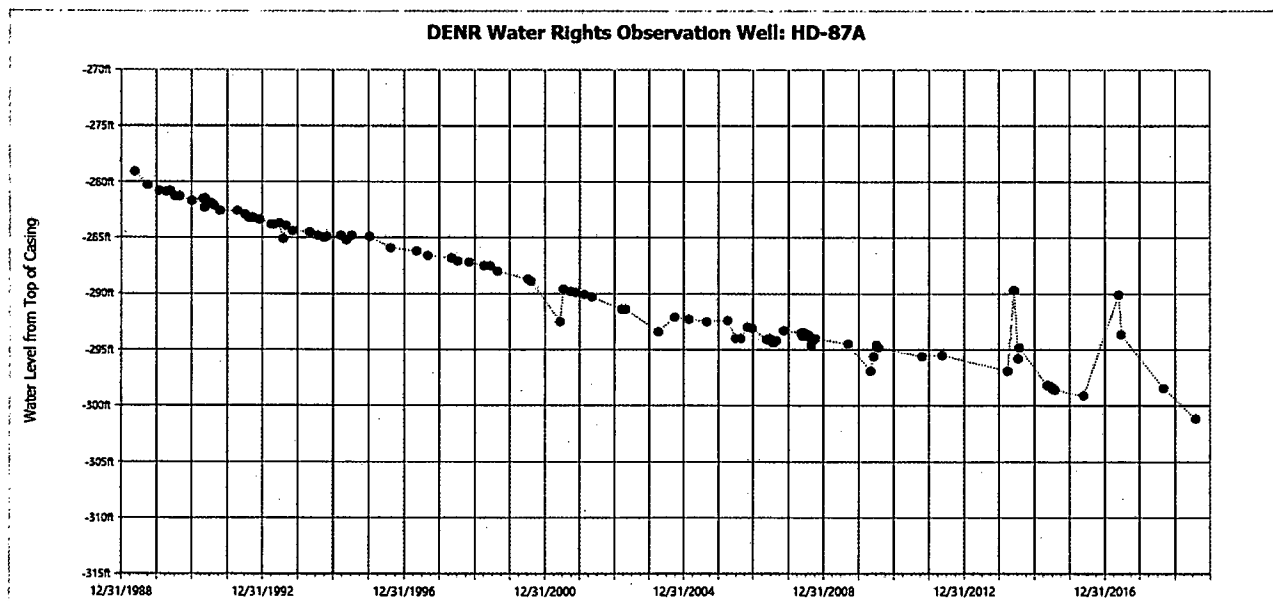


Figure 3. Hydrograph for observation well HD-87A (Water Rights, 2021b)

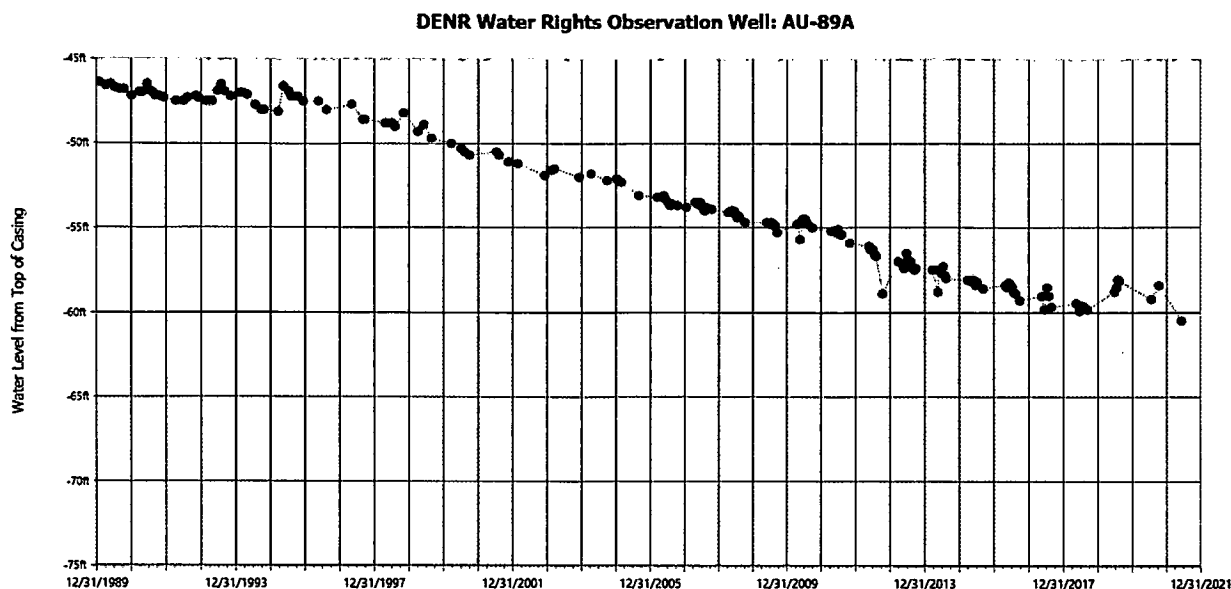


Figure 4. Hydrograph for observation well AU-89A (Water Rights, 2021b)

Most hydrographs for observation wells completed into the Dakota aquifer display a declining trend. A decline in water levels (as seen on the hydrographs in Figures 3 and 4) in a confined aquifer does not necessarily indicate a significant decrease in water stored in the aquifer, as water levels above the top of the aquifer materials are representative of the hydraulic head (water pressure) inside the aquifer. Additionally, there are uncontrolled, flowing wells discharging water from the Dakota aquifer at ground surface, and it is expected water from the aquifer is also being discharged to other aquifers if wells completed into the Dakota aquifer have experienced casing failure. Concerns have developed over time about the decline in artesian head pressure of the Dakota aquifer. Schoon (1971) stated, “The fact that withdrawal from the artesian system exceeds recharge is clearly demonstrated by declining pressures.” However, the Water Management Board has found that past declines of the potentiometric surface do not automatically constitute that withdrawals have exceeded recharge (Water Rights, 1987). The Board has concluded that withdrawals exceeding the average annual recharge cannot be determined based solely upon a decline in head pressure, and in theory the Dakota aquifer head pressure is stabilizing relative to withdrawals and discharges (Water Rights, 1987). Overall, the Water Management Board’s decision to optimize development of the Dakota aquifer is favorable because by allowing beneficial pumping to occur, it is lowering the amount of pressure in the uncontrolled flowing wells, which is reducing the amount of water being discharged to waste.

While the overall trend in these historical measurements is downward, observation well ED-85A (approximately 33 miles northwest of well applicant proposes to use) completed into the Dakota aquifer has recorded a trend that has been stable to slightly increasing from 1991 to 2017 (Figure 2) (Water Rights, 2021b). An aquifer pumping test at the well was the cause for the drawdown in hydraulic head that occurred in 2018 (Figure 2) (Water Rights, 2021b).

In addition to the observation well hydrographs, a record of the potentiometric surface is shown through historical accounts. Schoon (1971) developed maps of the potentiometric surface of the Dakota aquifer using data modified from Darton (1909), from the State Engineer's office for the period 1914 to 1915, and a compilation of many reports over the period of 1936 to 1953. Wells that have been completed into the Dakota aquifer within the past three years and are located within five miles of the well applicant proposes to use were used to approximate the current potentiometric surface conditions (Table 1) (Water Rights, 2021d).

Table 1. Historic and current approximate water level elevations near the well the applicant proposes to use (Schoon, 1971; Water Rights, 2021d)

Data Source	Year(s)	Approximate potentiometric surface within five miles of the existing well (feet)
Schoon (1971), after Darton	1909	1,640 to 1,650
Schoon (1971), State Engineer's Office	1914-1915	1,400 to 1,410
Schoon (1971)	1936-1953	1,350 to 1,360
Well Logs Database	2018-Present	1,300 to 1,310

Throughout South Dakota, the hydrographs for observation wells and the potentiometric surface measurements of the Dakota aquifer show a decreasing trend in hydraulic head (Water Rights, 2021b). The decreasing trend is likely due to the uncontrolled flowing wells which the Water Management Board determined is not a beneficial use of water and does not constitute withdrawal pursuant to SDCL 46-6-3.1 (Water Rights, 1987). Since discharge from uncontrolled flowing wells is likely to continue until water levels in the aquifer decline to being at or below ground surface, continuing to allow beneficial pumping to occur reduces the amount of water being discharged to waste. Therefore, the Water Management Board has allowed development of the Dakota aquifer to continue.

Observation well BL-83A (approximately 122 miles southwest of the well the applicant proposes to use, as shown on Figure 1) has five high-yield wells (assumed to be high yield well if authorized a diversion rate greater than or equal to 0.2 cfs) within approximately five miles of it (Water Rights, 2021b and 2021c). The lithologic log on file for BL-83A noted the well was drilled 942 feet deep with the top of aquifer approximately 878 feet below the ground surface (SDGS, 2021). The lowest recorded static water level on the hydrograph (displayed in Figure 5) is approximately 99 feet, which indicates there was still about 779 feet of artesian head pressure in BL-83A even during drier periods when high-yield wells are expected to be pumping more water (Water Rights, 2021b). When considering that beneficial withdrawals are more favorable than letting water flow to waste, the amount of artesian head pressure in the Dakota aquifer, and the observation well datasets, there is a reasonable probability unappropriated water from the Dakota aquifer is available for the proposed appropriation.

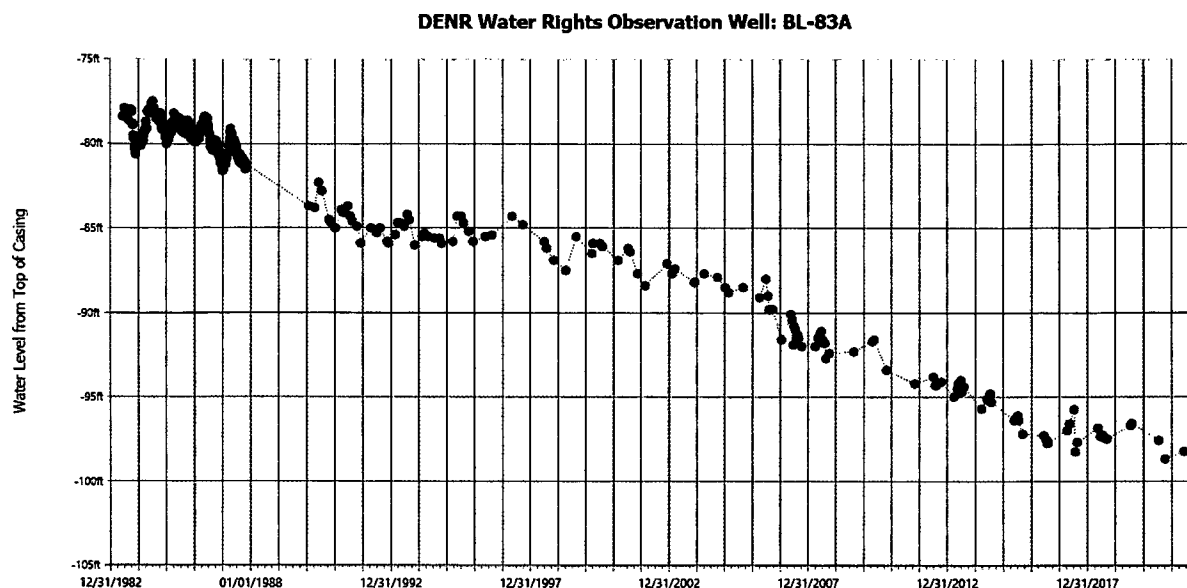


Figure 5. Hydrograph for observation well BL-83A (Water Rights, 2021b)

HYDROLOGIC BUDGET:

Recharge

Recharge to the Dakota aquifer in South Dakota occurs through upward leakage from underlying aquifers with higher artesian pressure than the Dakota aquifer, downward seepage from overlying confining layers and through infiltration of precipitation on the Newcastle Formation outcrops in the Black Hills (Bredehoeft, et al., 1983; Koch and Bradford, 1976; Steece and Howells, 1965). In Brown County, the Dakota aquifer also receives recharge from the Fall River aquifer (Koch and Bradford, 1976).

Using computer modeling, Bredehoeft, et al. (1983) attempted to match Darton's (1909) potentiometric surface map of the Dakota aquifer to develop a recharge estimate of approximately 79.4 cfs (57,500 acre-feet/year) before well development began. However, many assumptions used in Bredehoeft, et al.'s (1983) recharge estimate were incorrect and outdated. For example, assuming steady-state flow conditions between aquifers is unrealistic of real-world conditions and the recharge estimates used for the Madison and Inyan Kara aquifers in Bredehoeft, et al.'s (1983) analysis are much lower than estimates measured by more recent research (Bredehoeft, et al., 1983; Carter, et al., 2002). While Bredehoeft, et al.'s (1983) estimate can provide a scale of the Dakota aquifer's recharge rate, it cannot be used as an exact value for water management purposes. As the physical properties of aquifers and the locations where adjacent aquifers are in contact with each other are relatively undefined among many other factors, it is unknown whether the true recharge rate of the Dakota aquifer is higher or lower than Bredehoeft et al.'s (1983) estimate.

Discharge

Discharge from the Dakota aquifer in South Dakota occurs through well withdrawals, uncontrolled flowing wells, and outflow to overlying adjacent aquifers (Steece and Howells, 1965; Water Rights, 2021c). Outflow from the Dakota aquifer to overlying adjacent aquifers occurs on the slope and crest of the Sioux Ridge because the Dakota and other aquifers merge or are hydraulically connected at this location (Steece and Howells, 1965). Additional outflow from the Dakota aquifer to overlying adjacent aquifers occurs because of the high artesian pressure in the Dakota aquifer and through corroded well casings (Steece and Howells, 1965; Water Rights, 2021b).

Currently, there are 249 water rights/permits authorized to appropriate water from the Dakota aquifer within South Dakota, plus one pending application – Water Permit Application No. 8510-3 for irrigation use (Water Rights, 2021c). Additionally, there are seven future use permits reserving water from the Dakota aquifer (Water Rights, 2021c). For the purpose of estimated average annual withdrawals, the seven future use permits are assumed to be fully developable for a total of 4,237 acre-feet per year (Table 2).

Table 2. Future use water permits for Dakota aquifer with corresponding reserved water volume (Water Rights, 2021c)

Future Use Permit Holder	Amount of Reserved Water (acre-ft)
City of Canton (1262C-3, 5219-3)	1,849
City of Lennox (5101-3, 5101A-3)	0*
South Lincoln RWS (4817-3)	1,448
Lincoln RWS (5155-3)	440
City of Harrisburg (8400-3)	500
Total:	4,237
RWS: Rural Water System, *The City of Lennox has allocated the water they had reserved	

Of the 250 Dakota aquifer water rights/permits, 19 are for irrigation use (including the pending application), and 231 are for non-irrigation use. Table 3 summarizes the 231 non-irrigation water rights/permits authorized to appropriate water from the Dakota 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. It is worth noting, 12 non-irrigation water rights/permits on Table 3 are authorized to withdraw from one or more aquifers, in addition to the Dakota aquifer. One of these non-irrigation water permits (Permit No. 2804-3) had a specified volume out of their entire appropriated volume that was authorized only for the Dakota aquifer well. For the purpose of estimated average annual withdrawals, this water permit is assumed to withdraw the full specified volume permitted only for the Dakota aquifer well. The remaining eleven water rights/permits are authorized to withdraw from either their Dakota aquifer well or their well completed into a different aquifer at their permitted/licensed diversion rate, without having a certain diversion rate or volume designated for what each well is authorized to divert. For the purpose of estimated average

annual withdrawals, these water rights/permits are assumed to be withdrawing their full amount from the Dakota aquifer. Additionally, the municipal water rights/permits that are authorized to appropriate water from the Dakota aquifer, that are identified as being connected to a rural water system (RWS) likely maintain their wells for standby purposes (Friedeman, 2020; Water Rights, 2021c); as such, the average annual water use for these water rights has been estimated to be zero acre-feet per year on Table 3. Overall, the average annual withdrawal rate for the Dakota aquifer non-irrigation water rights/permits is approximately 22,511 acre-feet per year (Table 3) (Water Rights, 2021c).

Table 3. Summary of the non-irrigation water rights/permits authorized to appropriate from the Dakota aquifer with estimated annual use determined by their respective diversion rate or annual volume (Friedeman, 2020; Water Rights, 2021c)

Use Type	No. of Water Rights/Permits	Appropriation for Water Rights/Permits limited by Volume (ac-ft/yr)	Appropriation for Water Rights/Permits limited by Diversion Rate (cfs)	Total Estimated Use (ac-ft/yr)
RWS	6	2,005	2.2	2,961
SHD	7		3.33	1,447
REC	2		0.45	195
COM	102	945	11.74	6,044
DOM	11		1.753	762
FWP	4		2.73	1,186
GEO	2		2.33	1,012
INS	2		1.34	582
IND	6	160	0.84	525
MUN	89	3,274	10.41	7,798
TOTAL:	231	6,384	37.1	22,511
RWS: Rural Water System, SHD: Suburban Housing Development, REC: Recreation,				
COM: Commercial, DOM: Domestic, FWP: Fish & Wildlife Propagation, GEO: Geothermal,				
INS: Institutional, IND: Industrial, MUN: Municipal				

As development of the Dakota aquifer has increased over time, some of the appropriations have been made by rural water systems that are required to report their annual withdrawal rate (Water Rights, 2021c). Although there are several other rights/permits appropriating water from the Dakota aquifer, it is worth noting historically the average annual use has been less than the maximum volume that is authorized to be pumped (Water Rights, 2021c and 2021f). The withdrawals that are annually reported from the Dakota aquifer by appropriative users (South Lincoln RWS, Clay RWS, and Lincoln County RWS) are shown in Table 4 (Water Rights, 2021c and 2021f).

Table 4. Non-irrigation rural water system water rights/permits required to report their respective annual use from the Dakota aquifer (Water Rights, 2021c and 2021f)

	South Lincoln RWS	Clay RWS	Lincoln County RWS
	5647-3, 6300-3, 6490-3, 6778A-3	5997B-3	5156-3
2003	725		
2004	904		
2005	769		
2006	863	72	
2007	860	126	
2008	863	124	0
2009	773	119	0
2010	775	122	0
2011	785	116	0
2012	865	186	0
2013	765	155	0
2014	739	148	0
2015	711.5	141	0
2016	640	163	0
2017	643	201	0
2018	503	170	0
2019	562	162	0
2020	530	197.3	0
Max	904	201	0
Min	503	72	0
Avg	738	147	0
RWS: Rural Water System			

Currently, there are 18 irrigation water rights/permits appropriating water from the Dakota aquifer, plus the pending water permit application (Water Rights, 2021c). Irrigation water rights/permits have been typically required to report their annual usage on an irrigation questionnaire since 1979. Table 5 lists only 16 water rights/permits appropriating water from the Dakota aquifer as Water Right Nos. 394-3 and 762-3 are not required to submit an irrigation questionnaire. Collectively, Water Right Nos. 394-3 and 762-3 are authorized to irrigate 31.2 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 liberally estimate the annual withdrawal rate for these irrigation water rights. When applying one foot of water over the 31.2 acres currently authorized to be irrigated under Water Right Nos. 394-3 and 762-3, the estimated annual withdrawal rate for Water Right Nos. 394-3 and 762-3 is approximately 31.2 acre-feet per year

(Water Rights, 2021c). Upon approval, Water Permit Application No. 8510-3 authorizes 30 acres of golf course turf to be irrigated (Water Rights, 2021c). Turf irrigation typically requires more water than crop irrigation so an application rate of two feet of water per acre per year will be used to liberally estimate the annual withdrawal rate for this irrigation water permit. When applying two feet of water over the 30 acres to be authorized for irrigation under Water Permit Application No. 8510-3, the estimated annual withdrawal rate for Water Permit Application No. 8510-3 is approximately 60 acre-feet per year (Water Rights, 2021c).

To give a better representation of the current development of the Dakota aquifer, the average annual withdrawal rate for the irrigation water rights/permits that have reported over the last ten years was estimated. On average, the last ten years of Dakota aquifer irrigation water rights/permits pumped 206.3 acre-feet annually (Table 5) (Water Rights, 2021a). By combining the calculated withdrawal rate for the two irrigation water rights/permits that are not accounted for on Table 5 and the pending application, with the average annual withdrawal rate based on the development of the Dakota aquifer over the last ten years, the average annual withdrawal rate for the 18 Dakota aquifer irrigation water rights/permits is approximately 297.5 acre-feet per year (Water Rights, 2021a and 2021c).

There are domestic wells completed into the Dakota aquifer that do not require a water right/permit, so the withdrawal amount for domestic use is unknown (Water Rights, 2021d). Since the introduction of rural water systems, many domestic wells are likely no longer in use or are not being used as primary water sources. Due to their relatively low diversion rates and the availability of rural water, withdrawals from domestic wells are not considered to be a significant portion of the hydrologic budget for the Dakota aquifer. It is currently unknown how much water is being discharged from the Dakota aquifer through uncontrolled flowing wells. The Water Management Board has previously determined water being discharged through uncontrolled flowing wells is not a beneficial use and does not constitute appropriation pursuant to SDCL 46-6-3.1 (Water Rights, 1987).

Hydrologic Budget Summary

The estimated average annual recharge to the Dakota aquifer has not been accurately quantified. Bredehoeft et al. (1983) estimated a recharge rate of approximately 57,500 acre-feet per year but several factors make it uncertain if that is a high or low estimate. The average annual withdrawal rate for the water rights/permits authorized to appropriate water from the Dakota aquifer totals approximately 27,049 acre-feet per year (non-irrigation: 22,511 acre-feet/year, irrigation (from 2011 to 2020): 297.5 acre-feet/year, future use reservations: 4,237 acre-feet/year, and Water Permit Application No. 8518-3 (if approved): 3.1 acre-feet/year). Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the Dakota aquifer for the proposed appropriation.

Table 5. Reported historic irrigation use from Dakota aquifer (Water Rights, 2021a)

Year	No. of Permits	Annual Appropriation (acre-feet)	Reported Pumpage (acre-feet)
1979	2	729	38
1980	2	729	110
1981	4	1469	45
1982	5	1,420.52	33.23
1983	5	1,834.76	64.39
1984	4	1,405.76	0
1985	5	1,554.26	8.1
1986	5	1,834.76	238.85
1987	5	1,900.52	1.3
1988	4	1,471.52	452.8
1989	4	1,471.52	265.4
1990	4	1,471.52	234
1991	5	1,481.52	165.42
1992	5	1,501.52	40.4
1993	7	1,521.52	112.4
1994	7	1,455.76	51.89
1995	8	1,051.76	30.83
1996	8	1,117.52	34.38
1997	9	1,127.52	48
1998	9	637.52	175.8
1999	10	703.52	101.57
2000	10	703.52	172.81
2001	11	777.52	160.85
2002	10	763.52	178.87
2003	10	763.52	205.02
2004	10	763.52	153.97
2005	12	1,003.52	146.51
2006	13	1,211.52	232.32
2007	14	1,238.52	199.98
2008	14	1,238.52	196.39
2009	15	1,298.52	130.76
2010	17	1,950.52	171.66
2011	18	2,158.52	174.57
2012	18	2,158.52	298.33
2013	18	2,158.52	256.52
2014	17	2,354.52	162.86
2015	17	2,576.32	236.1
2016	16	2,368.32	195.95
2017	16	2,368.32	229.07
2018	16	2,368.32	156.71
2019	15	2,057.12	107.52
2020	16	2,183.12	245.61
Min	2	637.5	0
Max	18	2,576.3	452.8
Avg (1979 to 2020)	10	1,484.6	149.1
Avg (2011 to 2020)	17	2,275.2	206.3

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are 249 water rights/permits authorized to appropriate water from the Dakota aquifer, plus one pending application – Water Permit Application No. 8510-3, plus an additional seven future use permits reserving water in the Dakota aquifer (Water Rights, 2021c). The closest water right/permit to the well the applicant proposes to use is Water Permit No. 8377-3 which is held by Elm Valley Farms LLC. The diversion point for Water Permit No. 8377-3 is located approximately 4.3 miles southwest of the existing well the applicant proposes to use for this application (Figure 6) (Table 6) (Water Rights, 2021c).

There are domestic wells on file with the DANR-Water Rights Program that are completed into the Dakota aquifer, with the closest domestic well on file (not held by the applicant) approximately 1.6 miles west of the existing well (Water Rights, 2021d). There could potentially be other domestic wells completed into the Dakota aquifer near the well the applicant proposes to use that are not on file with the DANR-Water Rights Program.

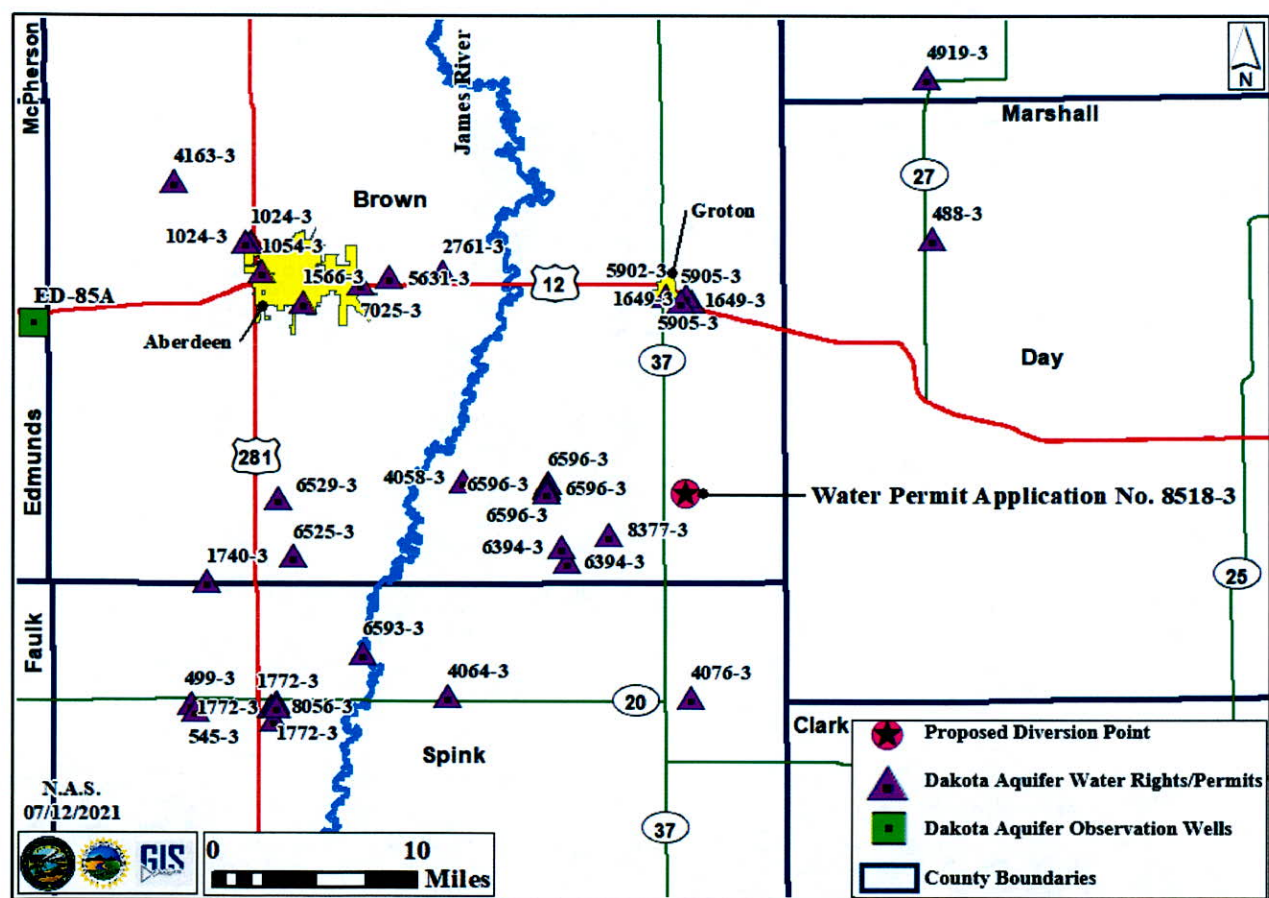


Figure 6. Location of the well the applicant proposes to use for Water Permit Application No. 8518-3 with the Dakota aquifer water rights/permits and observation wells within approximately 20 miles (Water Rights, 2021b and 2021c)

Table 6. Water rights/permits authorized to withdraw water from the Dakota aquifer within approximately 20 miles of the well the applicant proposes to use, as shown in Figure 6 (Water Rights, 2021c)

Permit No.	Name	Status	Use(s)	Diversion Rate (cfs)	Authorized Volume (acre-feet)
488-3	Town of Pierpoint	LC	MUN	0.44	
499-3	City of Northville	LC	MUN	0.06	
545-3	City of Northville	LC	MUN	0.02	
1024-3	City of Aberdeen	LC	DOM,REC	0.42	
1054-3	Rolling Hills Golf Development LLC	LC	IRR	0.62	
1566-3	Melody Lane Subdivision	LC	SHD	0.07	
1649-3	City of Groton	LC	MUN	0.4	
1740-3	Mansfield Water Users	LC	MUN	0.22	
1772-3	Town of Mellette	LC	MUN	0.13	
2761-3	SD Wheat Growers Association	LC	COM	0.02	
4058-3	Town of Stratford	LC	MUN	0.11	
4064-3	Town of Bradford	LC	MUN	0.03	
4076-3	City of Conde	LC	MUN	0.18	
4163-3	Spillway Drive Water Association	LC	SHD	0.16	
4919-3	Town of Langford	LC	MUN	0.13	
5631-3	SD Wheat Growers Association	LC	COM	0.16	
5902-3	City of Groton	LC	MUN	0.39	
5905-3	City of Groton	LC	IRR	0.56	
6394-3	Hutterville Hutterian Brethren	PE	COM, DOM, LCO	0.49	
6525-3	Nilsson Farms	PE	COM, LCO	0.133	
6529-3	Braun Farms Inc	LC	COM, LCO	0.018	
6593-3	Leroy Braun	PE	COM, LCO	0.067	
6596-3	Jerry Schley	LC	COM, LCO	0.1	
7025-3	Upper Plains Contracting Inc	LC	COM	0.111	
8056-3	Agtegra Cooperative	LC	COM	0.2	
8377-3	Elm Valley Farms LLC	PE	COM	0.11	80

The Dakota aquifer is under confined conditions near the well location the applicant proposes to use based on the submitted well completion report and lithologic logs on file for nearby observation wells (SDGS, 2021; Water Rights, 2021b and 2021d). Since the Dakota aquifer is confined at the well site, drawdown can extend some distance but the exact drawdown behavior of a well cannot be known without an aquifer performance test. At the well location, the Dakota aquifer has a saturated aquifer thickness of approximately 243 feet with depth to the top of aquifer materials approximately 885 feet below the ground surface according to the well completion report submitted with the application (Water Rights, 2021d). This would allow for enough thickness for a pump inlet 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 Brown County, there are no complaints on file with the DANR-Water Rights Program regarding well interference for adequate wells completed into the Dakota 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 Dakota 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 thickness of the Dakota aquifer in Brown County, and the lack of well interference complaints from the Dakota aquifer in this county, any drawdown created from the proposed diversion is not expected to cause an unlawful impairment on existing water right/permit holders or domestic users with adequate wells. Additionally, the Dakota aquifer well the applicant proposes to use is an existing well that has been in place and is presumed to have been in use for some time without any reported well interference complaints on file with the DENR-Water Rights Program (Water Rights, 2021d and 2021e). Therefore, there is a reasonable probability that any interference from the proposed appropriation will not impose unlawful impairments on existing users with adequate wells.

Special Consideration: Declining Hydraulic Head

As the Dakota aquifer is a confined aquifer, the hydraulic head causes the water within the aquifer to rise above the top of the aquifer. In the late 1800’s, wells began being completed into the Dakota aquifer and a decline in the aquifer’s hydraulic head occurred whenever a flowing well was drilled and not properly controlled. These uncontrolled wells create a release of pressure contained within the aquifer. The decline has caused some concern on whether the Dakota aquifer withdrawals have exceeded the recharge to the aquifer. The Water Management Board has previously and carefully considered the declining hydraulic head in the Dakota aquifer. In the deliberation and approval of Water Permit No. 5136-3, for Farmland Industries Inc, the Water Management Board approved the findings of facts and conclusions of law containing the following summarized points (Water Rights, 1987):

- The estimated average annual recharge to the Dakota aquifer is not likely to be quantified in the near future;
- Determination of whether the withdrawals exceed the estimated average annual recharge cannot be determined solely by a decline in the hydraulic head;
- SDCL 46-6-6.1 does not require the artesian head to be protected; however, the Board must consider the effect of a limitation or loss of artesian head as one of the factors under the public interest determination;
- The decline in the hydraulic head in the Dakota aquifer has been primarily due to water being discharged through uncontrolled flowing wells;
- "Water discharged from uncontrollable flowing wells does not constitute withdrawal (appropriation) pursuant to SDCL 46-6-3.1;"
- That it is in the public interest to appropriate water rather than allow the water to be discharged to waste by uncontrolled flowing wells;
- That it is not in the public interest to deny a water permit application when the effects of the withdrawal will not be measurable and will not have a significant effect upon the decline or stabilization of the hydraulic head in the Dakota aquifer.

Special Consideration: Well Construction

The well completion report for the well the applicant proposes to use does not meet adequate well construction standards as defined in ARSD 74:02:04:20.

An adequate well has been defined in ARSD 74:02:04:20(6) as:

"A well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet. "

The alternative well construction requirements for certain Dakota aquifer wells (74:02:04:35) are not permitted for recreational use, or fish and wildlife propagation use. However, the well to be put to appropriate use in the proposed diversion is an existing well. Any future replacement wells shall meet the adequate well construction standard as defined in ARSD 74:02:04:20. Replacement wells may not be constructed using the alternative construction requirements that are allowed for domestic use wells outlined in ARSD 74:02:04:35.

CONCLUSIONS:

1. Water Permit Application No. 8518-3 proposes to appropriate up to 3.1 acre-feet of water annually at a maximum instantaneous diversion rate of 0.033 cfs (15 GPM) from one well (1,128 feet deep) completed into the Dakota aquifer. The applicant is requesting to pump from the well to maintain the water level in a small pond for recreational and fish and wildlife propagation use. This site is in Brown County approximately ten miles south of Groton, South Dakota.
2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the Dakota aquifer to supply the proposed appropriation.
3. There is a reasonable probability that the proposed diversion by Water Permit Application No. 8518-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic users.
4. The decline in the hydraulic head in the Dakota aquifer has been primarily due to water being discharged through uncontrolled flowing wells. It is in the public interest to appropriate water rather than allow the water to be discharged to waste by uncontrolled flowing wells.



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

Reviewed by:



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

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Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, July 20, 2021 10:35 AM
To: brycecvk@live.com
Subject: Water Permit Application No. 8518-3
Attachments: 1527.pdf; Order_Confirmation_SD.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 as soon as possible to authorize publication and arrange for payment. This information is being mailed to you today.

The second document was received from the Aberdeen American News with a order number which should be helpful when contacting them.

Karen Schlaak

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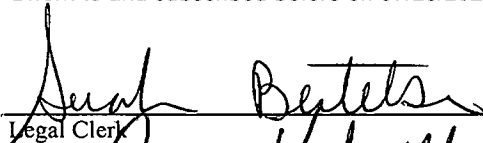
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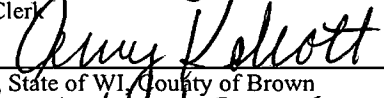
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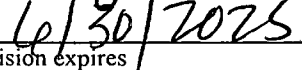
The AMERICAN NEWS is a daily newspaper of general circulation, printed and published in Aberdeen, Brown County, South Dakota, and has been such a newspaper during the times hereinafter mentioned; and personal knowledge of the facts herein state that the notice hereto annexed was Published in said newspapers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

07/28/2021

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 07/28/2021


Legal Clerk


Notary, State of WI, County of Brown


My commission expires

Publication Cost: \$33.84

Order No: 6090380

of Copies:...

Customer No: 561459

1

PO #:

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

AMY KOKOTT
Notary Public
State of Wisconsin

NOTICE OF
APPLICATION NO. 8518-3
to Appropriate Water

Notice is given that Bryce Sombke, 40746 144th St, Conde SD 57434 has filed an application for a water permit to appropriate 3.1 acre-feet of water annually at a maximum pump rate of 0.033 cubic feet of water per second from one well completed into the Dakota Aquifer (1,128 feet deep) located in the SW 1/4 SE 1/4 Section 8-T121N-R60W. The applicant is requesting to pump from the well to maintain the water level in a small pond for recreational and fish and wildlife propagation purposes. This site is located approximately 10 miles south of Groton SD. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8518-3 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 August 9, 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 \$33.84.
July 28, 2021 #6090380

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, July 20, 2021 8:21 AM
To: Aberdeen News Legals (aan-legals@aberdeennews.com)
Subject: 8518-3, Bryce Sombke
Attachments: 8518-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on July 28, 2021.

Bryce Sombke, 40746 144th St, Conde SD 57434 (605 290-6283) 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
DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

July 20, 2021

Bryce Sombke
40746 144th St
Conde SD 57434

Dear Mr. Sombke:

Water Permit Application No. 8518-3 for recreational use and fish and wildlife propagation has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the American News printed at Aberdeen SD (Ph # 605 225-4100). You will need to contact the newspaper 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 newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has 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. 8518-3 to Appropriate Water

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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

AUG 17 2021

Bryce Sombke
40746 144th St
Conde SD 57434

Dear Mr. Sombke:

Enclosed is Water Permit No. 8518-3 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

8518-3
RECEIVED

AUG 23 2021

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 08/19/2021TO: Water Rights Program, DANR
523 E. Capitol
Pierre, SD 57501-3181

FROM:

Bryce Sombke
(name)40740 144th St
(address)Conde. SD 57434
(city, state, zip)605-290-6203
(phone)

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. 8518-3 states that the water use system is to be constructed by 08/19/2021, and water is to be put to beneficial use by 08/19/2021.
(date) (date)

The water use system was completed on 05/24/2021.
(date)

Applying the water to beneficial use was completed on 08/19/2021.
(date)

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

Bryce Sombke
(signature)





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

August 25, 2021

8518-3

Bryce Sombke
40746 144th St
Conde SD 57434

Dear Mr. Sombke:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your water use system.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us