

WATER PERMIT NO. 2806-2

Name of Applicant: Black Hills Power Inc

Address: 7001 Mt. Rushmore Rd, Rapid City SD 57702

Phone: 605 721-2783

Amount of Water Claimed: 0.1 cfs

Total Acres: 25.5

Source of Water Supply: groundwater (one existing well)

Water to be used for: irrigation

County: Pennington

Type of Waste Disposal System:

Location: south of Rapid City

PRIORITY

Date Received: 10-11-19

Application/License Fee: \$ 700

Corrected Application Received:

Period of Annual Use: April 1 – October 31

Remarks: Well water will be used to fill a 2.35 AF storage pond as well as irrigation

Diversion Point: NE 1/4 SE 1/4 Sec 27-T1N-R7E

Land to be Irrigated: SE 1/4 NE 1/4 Sec 27 & SW
1/4 NW 1/4 Sec 26; all in T1N-R7E

Depth of Well: 1400 feet deep

Well Driller:

Remarks:

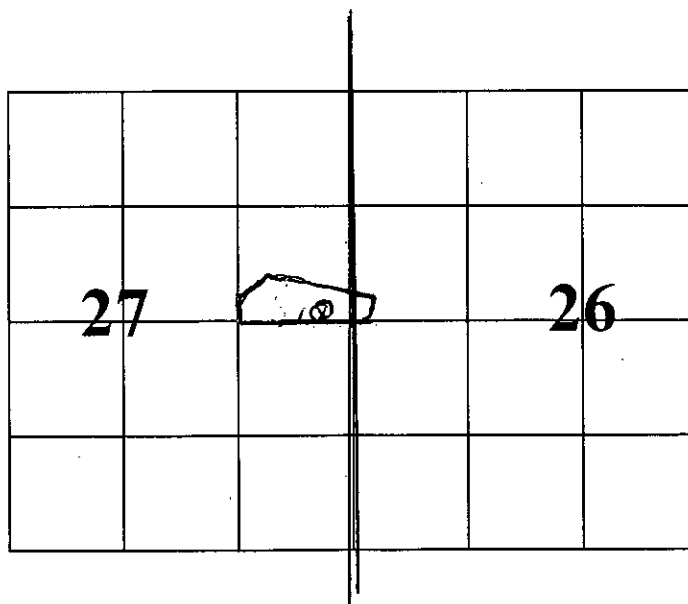
Type of Map: aerial

Prepared by: Ferber Engineering

Reviewed and the Number Assigned on: 10-11-19

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA
WATER PERMIT NO. 2806-2

Date of first receipt of application October 11, 2019.

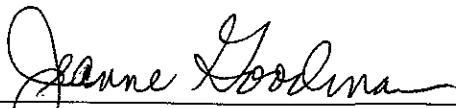
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2806-2 to Black Hills Power Inc, c/o Scott A Buchholz, 7001 Mt Rushmore Rd, Rapid City SD 57702 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2806-2 appropriates 0.10 cubic feet of water per second (cfs) from one well completed into the Minnelusa Aquifer (1400 feet deep) located in the SE 1/4 NE 1/4 Section 27 to irrigate 25.5 acres located in the (Lot 1 of C2B Addition) SE 1/4 NE 1/4 Section 27 and SW 1/4 NW 1/4 Section 26; all in T1N-R7E. Water will be pumped from the well to maintain a 2.35 acre-feet storage pond. The pond is fed by stormwater and water levels will be maintained using the well. Water will be pumped from the pond at a rate up to 0.11 cfs to apply water to the irrigated acres. This site is located at the junction of Catron Boulevard and Highway 16 south of Rapid City.
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 October 11, 2019.
4. The date of approval of Permit No. 2806-2 is January 6, 2020.
5. One-fifth of the construction is to be completed on or before July 6, 2022.
6. All construction is to be completed on or before January 6, 2025.
7. Water is to be put to beneficial use on or before January 6, 2029.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 2806-2 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: 
Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JAN 10 2020
date



PAID

OCT 11 2019

Ck# 013707

RECEIVED

OCT 11 2019

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	(office use only) No. _____ Hydrologic Unit _____
	Basin _____
	Newspaper _____

Application For Permit To Appropriate Water For Irrigation

WATER RIGHTS
PROGRAM

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.)

To replace Existing Water Permit No. 1905-2 (Permit No. 1905-2 to be cancelled and replaced with this appropriation - see attached cover letter)

1. Name to Appear on Irrigation Permit Black Hills Power, Inc.

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

Mailing Address 7001 Mt. Rushmore Road Rapid City SD 57702
(Address) (City) (State) (Zip Code)

Phone 605-721-2783 Mobile _____ Email Chris.Anderson@blackhillscorp.com

2. Amount of water claimed 0.1 *CFS or 45 **GPM ***AF Total Acreage 25.5
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Existing well permitted under Water Permit 1905-2

4. Location of point of diversion SE1/4NE1/4 Section 27, T1N, R7E, BHM
(2.35 AF) (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
Rapid City, South Dakota Storage pond - SE1/4 NE1/4 Sec 27 - T1N - R7E County Pennington

5. County or counties where water will be used Pennington6. Annual period during which water is to be used April - October

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

Land Description	Acres	Land Description	Acres
Lot 1 of C2B Addition, S27, T1N, R7E, BHM	25.5		
(SE1/4NE1/4 Sec 27 & SW1/4NW1/4 Sec 26)			

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

Per SDDENR, this permit application serves as a cancellation of Permit No. 1905-2 at a rate of 0.06 gpm to an irrigation use at 0.1 gpm. Upon development of the BHC site, the existing well was replumbed to be used as a secondary source of water for site irrigation. It is controlled by float switch in an onsite landscape/irrigation pond. A new pump was set at 900 feet to ensure that long term drawdown would not impact pump operation. A 23 gpm pump test revealed a 134' drawdown in 1hr 42 min. Recovery was attained in 47 min.

I, Scott A. Bullock SVP / CIO, the applicant, certify under
Name of Person Title (if applicable)

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

Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☒ Using existing well(s)

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

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

For either Existing or Proposed Wells:

c) Well Depth (required) 1400 Depth to Top of Water Bearing Material 1267 Depth to Water from Surface 308

d) Distance to nearest domestic well on applicant's property N/A Property owned by others 2000' +

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 Permanent water surface - 0.56 ac Depth 6.5

b) Depth to water (ground surface to water level) fed by stormwater and water well

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 0

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)

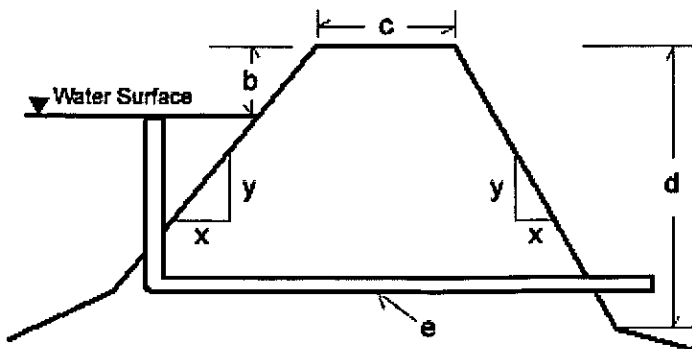
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



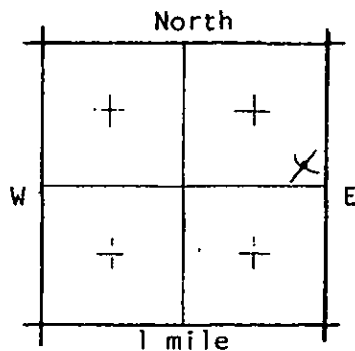
STATE OF SOUTH DAKOTA WELL DRILLERS REPORT

Location SE 1/4 NE 1/4 Sec 27 Twp 1N Rg 7E

County

Pennington

Please mark well location with an "X"



Well Completion Date 11-20-72

PROPOSED USE: ☒ Commercial
☐ Domestic ☐ Municipal ☐ Test Holes
☐ Irrigation ☐ Industrial ☐ Stock

Method of Drilling:

Air rotary & mud rotary

WELL CONSTRUCTION:

Diameter of hole 7 7/8 inches Depth 600/1400 feet

Casing: ☒ Steel ☐ Plastic ☐ Other

Specify

Pipe Weight Diameter From To
23 lb/ft 7 inches 0 feet 600 feet
15 lb/ft 5 1/2 inches 600 feet 1300 feet

Was a well screen used? ☐ Yes ☒ No

If Not Specify open hole completion

Screen Type Slot Size

Length Diameter

Was Casing left open end? ☒ Yes ☐ No

Was a Packer or seal used? ☐ Yes ☐ No

If so what material?

Was well gravel packed? ☐ Yes ☒ No

Was well grouted? ☒ Yes ☐ No

Describe grouting procedure pressure grouted

around bottom of 5 1/2" & 7" pipe
 To what depth? Feet

What was grouting material? cement

If cement, how many sacks? 40

Location of packer(s) and screen or perforated pipe

WAS WELL PLUGGED OR ABANDONED ☐ Yes ☒ No

If so how and with what material?

Well Owner:

Name Henry Bachmeier

Address

Well Log:

Depth

Formation	From	To
Shale	0	30
gravel	30	50
gray shale	50	185
red ss	185	265
interbedded ss & shale	265	640
Spear fish shale	640	1090
Minnokahta	1090	1137
red shale (opeche)	1137	1267
Minnelusa (ss)	1267	1380
" (limestone)	1380	1400

STATIC WATER LEVEL 400 Feet

If flowing: closed in pressure PSI

GPM flow through inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify

Can well be completely shut off?

WELL TEST DATA:

☐ Pumped

☐ Bailed

☐ Other

Describe: air developed

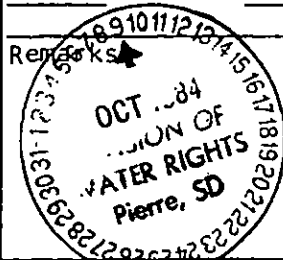
Pumping Level Below Land Surface

600 ft. After 5 Hrs. pumped 40 GPM

ft. After Hrs. pumped GPM

ft. After Hrs. pumped GPM

Remarks



This well was drilled under license # 331

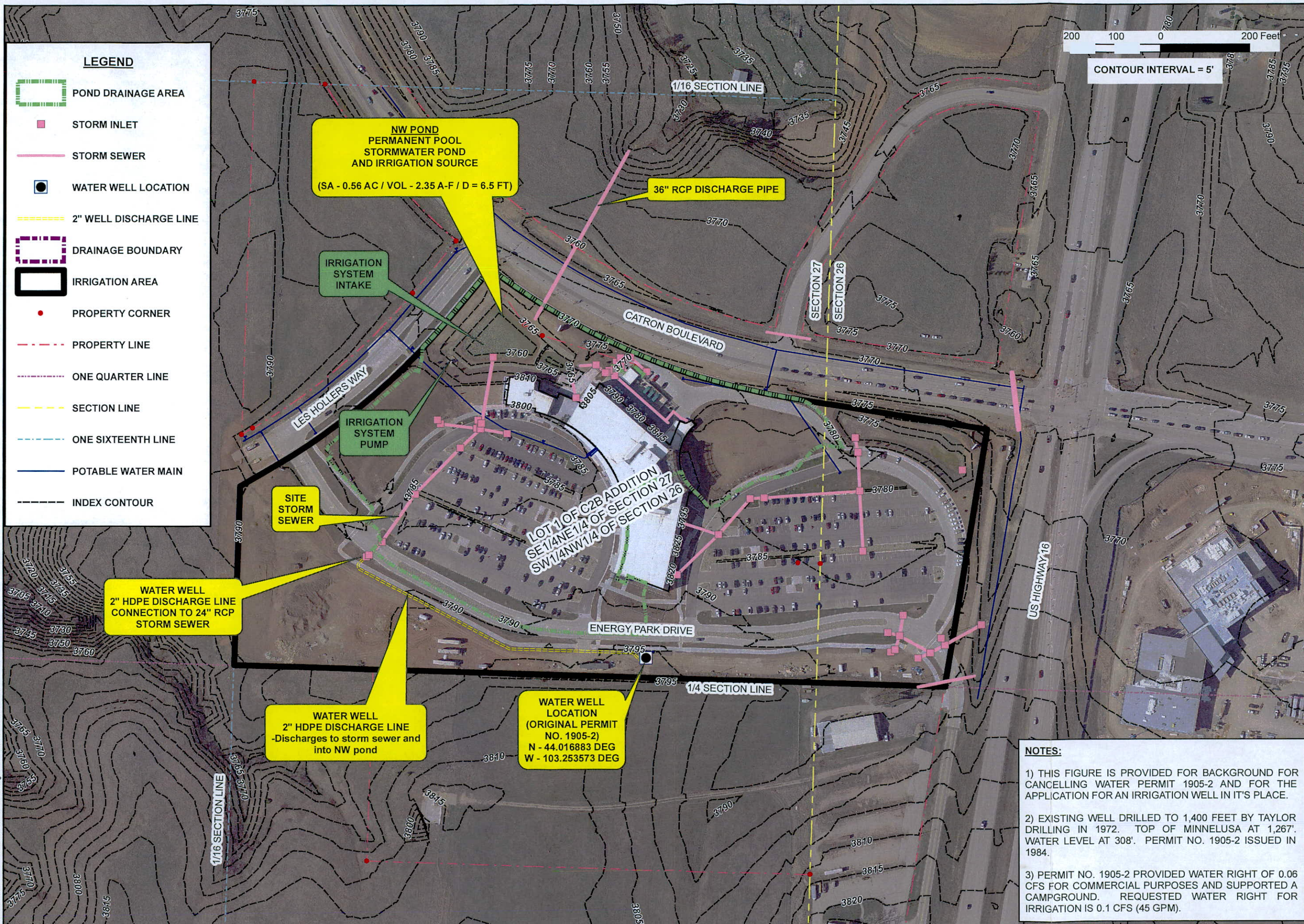
and this report is true and accurate.

Taylor Drilling
 Drilling Firm

Ralph Taylor
 Signed by

10-4-84
 Date

Date: 9/17/2019 File: P:\14-145\GIS\WCD\Figure 1 water well location.mxd



Prepared For:

BLACK HILLS CORPORATION
Black Hills Corporation
Imagery by earthstar

Civil Engineering
Geospatial Solutions
Water Resources
Transportation
Land Surveying

725 East Waterdown St., Rapid City, SD 57701 • Phone: (605) 343-3311

FIG 1

Prepared By:

N
W
E
S

BLACK HILLS CORPORATION

LOT 1 OF C2B ADDITION - SE 1/4 NE 1/4 OF SECTION 27, T1N, R7E, BHM

RAPID CITY, PENNINGTON COUNTY, SD

Sheet Title: **FIGURE 1.**

WATER WELL & IRRIGATION DIVERSION LOCATION

Sheet: **1**

1N7E
Section:21

1N7E
Section:22

1N7E
Section:23

1N
Section

1N7E
Section:28

1N7E
Section:27

1N7E
Section:26

1N
Section

1N7E
Section:33

1N7E
Section:34

1N7E
Section:35

1N
Section



530832122

ANNUAL REPORT

Secretary of State
500 E. Capitol Ave
Pierre, SD 57501-5070
(605) 773-4845

Domestic Business Corporation
SDCL 59-11-24, 24.1

Please Type or Print Clearly in Ink
Please submit one Original
Make payable to the SECRETARY OF STATE

Filing Fee: \$50

Total Fee: \$50

2019
FILING YEAR

1. Business ID and Name:

DB000778
BUSINESS ID

BLACK HILLS POWER, INC.
BUSINESS NAME

2. The jurisdiction under whose law it is formed **SOUTH DAKOTA**

3. The address of the principal executive office (business address):

Actual Street Address

**7001 MT. RUSHMORE ROAD
RAPID CITY, SD 57702**

Mailing Address

**ATTN: BRIAN G. IVERSON
PO BOX 1400
RAPID CITY, SD 57709-1400**

4. The South Dakota Registered Agent's Name:

South Dakota law permits the registered agent to be either (a) a noncommercial registered agent, (b) a commercial registered agent, or (c) an office holder.

(b) The South Dakota Commercial Registered Agent's name & CRA#

CRA: **CORPORATION SERVICE COMPANY (00000003)**

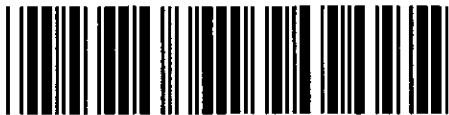
Actual Street Address in this State

**503 S PIERRE ST
PIERRE, SD 57501-4522**

Mailing Address in this State

5. The names and business addresses of its principal officers.

Title	Name	Address
Vice President	Karen Beachy	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Donna E. Genora	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Marne Jones	7001 Mt. Rushmore Road, Rapid City, SD 57702
President	Linden R. Evans	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Kyle D. White	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Richard W. Kinzley	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Stuart A. Wevik	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Nick Gardner	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Mark E. Stege	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Mark L. Lux	7001 Mt. Rushmore Road, Rapid City, SD 57702
Treasurer	Kimberly F. Nooney	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Scott A. Buchholz	1102 E. 1st Street, Papillion, NE, 68046



Secretary	Brian G. Iverson	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Esther J. Newbrough	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Jennifer C. Landis	7001 Mt. Rushmore Road, Rapid City, SD 57702
Secretary	Amy K. Koenig	7001 Mt. Rushmore Road, Rapid City, SD 57702
Vice President	Jodi Culp	1102 E. 1st Street, Papillion, NE, 68046
Vice President	Marc Ostrem	7001 Mt. Rushmore Road, Rapid City, SD 57702

6. The names and business addresses of its directors (governors).

Name	Address
Linden R. Evans	7001 Mt. Rushmore Road, Rapid City, SD 57702
Richard W. Kinzley	7001 Mt. Rushmore Road, Rapid City, SD 57702
Brian G. Iverson	7001 Mt. Rushmore Road, Rapid City, SD 57702

7. Beneficial Owners (optional): A beneficial owner is a person who has or in some manner controls an equity security. Please consult an attorney for legal advice if you have any questions concerning this entry. Any question under this heading is considered a request for legal advice and the secretary of state's office is, by statute, not permitted, to provide legal advice.

No person may execute this report knowing it is false in any material respect. Any violation may be subject to a civil and/or criminal penalty (SDCL 47-1A-129; 22-39-36).

07/30/2019

Dated

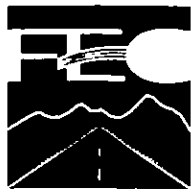
Email (Optional)

Brian G. Iverson

Signature of an Authorized Person

Brian G. Iverson

Printed Name



**Ferber
Engineering
Company, Inc.**

- Civil Engineering
- Geospatial Solutions
- Water Resources
- Transportation
- Land Surveying

October 7, 2019

Mr. Eric Gronlund
South Dakota Department of Environment
Water Rights Program
523 E. Capitol – Joe Foss Building
Pierre, SD 57501

RECEIVED

OCT 11 2019

**WATER RIGHTS
PROGRAM**

**RE: Water Well Permit Application – Black Hills Corporation
SE1/4NE1/4 of Section 27 and SW1/4NW1/4 of Section 26, T1N, R7E, BHM
Rapid City, Pennington County, South Dakota**

Please find enclosed a water well permit application for the aforementioned project. This water well application is presented as a new well application per discussions with you. This application is requesting cancellation of Permit No. 1905-2, which granted 0.06 gpm usage for commercial purposes, AND reservation of a 0.1 gpm water right as replacement for the original permit.

In 2017, Black Hills Corporation completed construction of Horizon Point, which is their new corporate headquarters, in the southwest quadrant of the intersection of Highway 16 and Catron Boulevard in southern Rapid City. The site includes the Jellystone Campground (Henry Bachmeier – 4 B's Campground), which held Permit No. 1905-2. The new Horizon Point facility is served potable water from the City of Rapid City. The existing well will be used to irrigate the 25.5 acre +/- site. The existing Minnelusa well was drilled in 1984 to a depth of 1,400 feet. The original well drillers report is attached hereto.

The irrigation system for Horizon Point is composed of a permanent pool landscape pond that has a permanent pool area of 0.56 acres +/- with a permanent pool storage of approximately 2.35 ac-ft. The pond is entirely incised and is lined with bentonite to minimize water loss. The facility is fed by stormwater from approximately 15 acres of the property that runs through a series of surface conveyances, storm sewer and finally a Stormceptor system. The pond also serves as a stormwater detention facility to meter stormwater flows before they leave the site.

A separate surface water irrigation pump is located within the pond and pumps at a rate of approximately 45 to 50 gpm when in use. The proposed use of the well for irrigation is to provide supplemental irrigation water for the pond to maintain water levels during dry or droughty periods. The 45 gpm water right request is to ensure that the well production can maintain water levels for the irrigation pump during long dry periods. During construction of the facilities, a new pump and discharge piping were installed. The static water level at the time of pump setting was 308 feet; the pump was lowered to 900 feet to ensure adequate pump water supply. During a pump test in 2016, the well was pumped at 25 gpm for 1hr 37 min with a total drawdown of 134.5 feet; the well recovered in 47 min.

Figure 1 is included to show the parcel to be irrigated, the location of the well, the location of the surface water irrigation pump and the permanent pool pond. Additionally, the original well drillers report is attached.

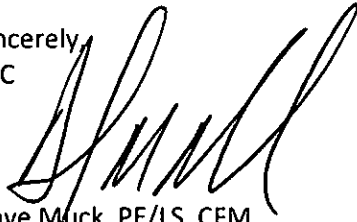
October 7, 2019

Page 2

Please copy me on any correspondence during processing of this application. If you have any questions or require additional information, please contact me by email at davemuck@ferberengineering.com or by telephone at (605)343-3311.

Sincerely,

FEC

A handwritten signature in black ink, appearing to read 'DMuck', written over the printed name.

Dave Muck, PE/LS, CFM
Vice President

Cc: Mr. Chris Anderson, Black Hills Corporation, Director Real Estate Facilities

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date October 11, 20 19

RECEIVED OF Ferber Engineering Company, Inc. 729 East Watertown Street Rapid City 57701

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

Fee for Application for Permit No. <u>2806-2</u> 1905-2 to Appropriate Water, to construct and to put water to beneficial use	500	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>2806-2</u> 1905-2	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	700 00

No. **09216**

By Jeanne Goodman
Chief Engineer
2ym



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2806-2, Black Hills Power, Inc.**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2806-2, Black Hills Power Inc., 7001 Mt. Rushmore Road, Rapid City SD 57702.

The Chief Engineer is recommending APPROVAL of Application No. 2806-2 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:

The well approved under Water Permit No. 2806-2 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.

This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

A handwritten signature in black ink that reads "Jeanne Goodman". The signature is fluid and cursive, with the first name "Jeanne" being more prominent than the last name "Goodman".

Jeanne Goodman, Chief Engineer
December 16, 2019

Report to the Chief Engineer on
Water Permit Application No. 2806-2
Black Hills Power Inc.
December 10, 2019

Water Permit Application No. 2806-2 proposes to appropriate water at a maximum diversion rate of 0.10 cubic feet per second (cfs) from one well completed in the Minnelusa aquifer (approximately 1,400 feet deep) located in the SE ¼ NE ¼ Section 27 in T1N-R7E. The proposed use of the water is to maintain a 2.35 acre-feet storage pond for the irrigation of 25.5 acres located in the SE ¼ NE ¼ Section 27 and SW ¼ NW ¼ Section 26 all in T1N-R7E in Pennington County. Water will be pumped from the well to maintain water level in a 2.35 acre-feet storage pond also fed by stormwater runoff. Water will be pumped from the pond at a rate up to 0.11 cfs to apply water to the irrigated acres. This site is located at the junction of Catron Boulevard and Highway 16 south of Rapid City. The well for this application is currently licensed under Water Right No. 1905-2 which is subject to cancellation since the use has been abandoned.

Aquifer: Minnelusa (MNLS)

Aquifer Characteristics and Hydrogeology

The Minnelusa Formation is generally made up of yellow to red colored cross-stratified sandstone, limestone, dolomite, and shale (Strobel et al., 1999). The Minnelusa aquifer is usually located within the poorly consolidated sandstones of the upper portion of the Minnelusa Formation (Greene et al., 1999) but can also occur within porous limestone within the formation. The Minnelusa aquifer underlies the Opeche Shale, which acts as a confining unit between the Minnelusa and the Minnekahta aquifers (Strobel et al., 1999). The Minnelusa aquifer overlies the Madison Formation. The lower portion of the Minnelusa Formation acts as a confining layer between the two aquifers but may have increased permeability in the area of the outcrop as a result of brecciation and fractures from folding (Kyllonen and Peter, 1987).

The amount of recoverable water in storage for the Minnelusa aquifer in western South Dakota is estimated at 755,555,520 acre-feet of which an estimated 51,432,000 acre-feet is in Pennington County (Allen et al., 1985). However, due to the large amount of heterogeneity in the characteristics of the Minnelusa aquifer, water availability at any one location is subject to variability. Additionally, water quality notably declines within a short distance from the outcrop areas. One of the most notable water quality changes in the Minnelusa aquifer is sulfate concentrations due to the dissolution of anhydrite near the outcrop (low concentrations) and lack of dissolution further from the outcrop (high concentrations) (Driscoll et al., 2002).

The well completion report for this application reports encountering the top of the Minnelusa at 1,267 feet below grade with the well open hole completed starting at 1,300 feet below grade to a total depth of 1,400 feet below grade. At the time of completion (Nov. 20, 1972), the static water level was measured at 400 feet below grade. While the exact date of the measurement was not provided, the applicant indicated that when a new pump was set in the well the static water

was at 308 feet below the measuring point. The aquifer is under confined conditions at the well site for this application and at the time of well completion there was approximately 867 feet of artesian head pressure above the top of the aquifer at the well site.

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 there is unappropriated water available for the applicant's proposed use, the proposed diversion can be developed without unlawful impairment of existing rights, and the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and potential effects on existing rights from the aquifer that are pertinent to this application.

Water Availability

Water Permit Application No. 2806-2 proposes to appropriate water from the Minnelusa aquifer for irrigation use. 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 the application is for a water distribution system defined pursuant to SDCL 46-1-6 (17), the Board need not consider the recharge/withdrawal issue. Here, the Minnelusa aquifer is older and lower than the Greenhorn Formation but a water distribution system is not involved, therefore the withdrawal/recharge issue must be considered.

Hydrologic Budget

Recharge

In the Black Hills, the Minnelusa aquifer is recharged by streamflow losses and infiltration of precipitation where the aquifer outcrops (Carter et al. 2001a). Carter et al. (2001a) as part of the Black Hills Hydrology study estimated combined average annual recharge from precipitation and streamflow to the Madison and Minnelusa aquifers in the Black Hills area for water years 1931-1998 at 344 cfs (249,211 acre-ft). When considering the distribution of this recharge between aquifers, Carter et al. (2001a) notes that both aquifers receive a similar volume of recharge from precipitation. However, recharge due to streamflow is thought to be slightly higher in the Madison aquifer due to the upgradient location of its outcrops (Carter et al. 2001a). Based on this, Carter et al. (2001a) estimated that the Madison aquifer receives about 55% (137,066 acre-ft) and the Minnelusa aquifer receives about 45% (112,145 acre-ft) of the combined average annual recharge, although it is noted that this is subject to temporal and spatial variability based on outcrop patterns and precipitation variability.

Withdrawals

Withdrawals from the Minnelusa aquifer are pumping from wells and headwater and artesian springs (Carter et al. 2001a). Well withdrawals can be divided into irrigation and non-irrigation uses. There are 189 water rights/permits currently authorized to withdraw water from the Minnelusa aquifer and one future use permit (Water Rights, 2019a). The majority of water rights/permits for the aquifer are located in Lawrence, Meade, Pennington, and Custer counties (Water Rights, 2019a).

Historically, water use by non-irrigation appropriations limited by instantaneous diversion rate have been estimated to be less than 60% of full time pumping at the permitted authorized diversion rate. The majority of the non-irrigation water rights/permits completed into the Minnelusa are limited by diversion rate. Water Right No. 1905-2 was not included in the estimate since it is subject to cancellation. For water rights/permits in the Minnelusa aquifer limited by diversion rate only, average annual withdrawals can be estimated at less than 13,857 acre-feet per year. For water rights/permits limited to an annual volume, full use of that volume is assumed for estimation of average annual withdrawal. Five water rights/permits are limited by annual volume at a total of 125.85 acre-feet per year. Future Use Permit No. 439-2 reserves 3,367 acre-feet from groundwater, infiltration galleries, and Minnelusa and Madison Formation wells located along Rapid Creek for municipal use by Rapid City but does not attribute specific amounts to any of the listed water sources. Since there is no specific water source attributed to Future Use Permit No. 439-2, the potential for the entire amount being developed from the Minnelusa aquifer should be accounted for in the hydrologic budget of the aquifer. In evaluating future use permits, it is assumed that the entire amount will be fully developed. Carter et al. (2001b) estimates average domestic and livestock watering use of the Minnelusa aquifer during water years 1987 to 1996 as 968 acre-feet (about twelve percent) of well withdrawals for the study period. Although domestic use from the Minnelusa has likely increased since Carter et al. (2001b), the domestic use presented in Carter et al. (2001b) can be considered a minimum estimate of domestic use for the Minnelusa aquifer. This results in an estimated average annual non-irrigation use of about 18,317.85 acre-feet per year [including Carter et al. (2001b) domestic use estimate as an estimate for non-appropriative domestic use].

The Water Rights Program collects and maintains irrigation data from across the state. Irrigation appropriations and reported pumping from 1982 to 2018 for water rights/permit completed into the Minnelusa aquifer are shown in Figure 1. Reported pumpage has varied over the period of record due to variations in climatic and economic conditions. The average reported pumpage for this time period is approximately 2,420 acre-feet (Water Rights, 1983-2019).

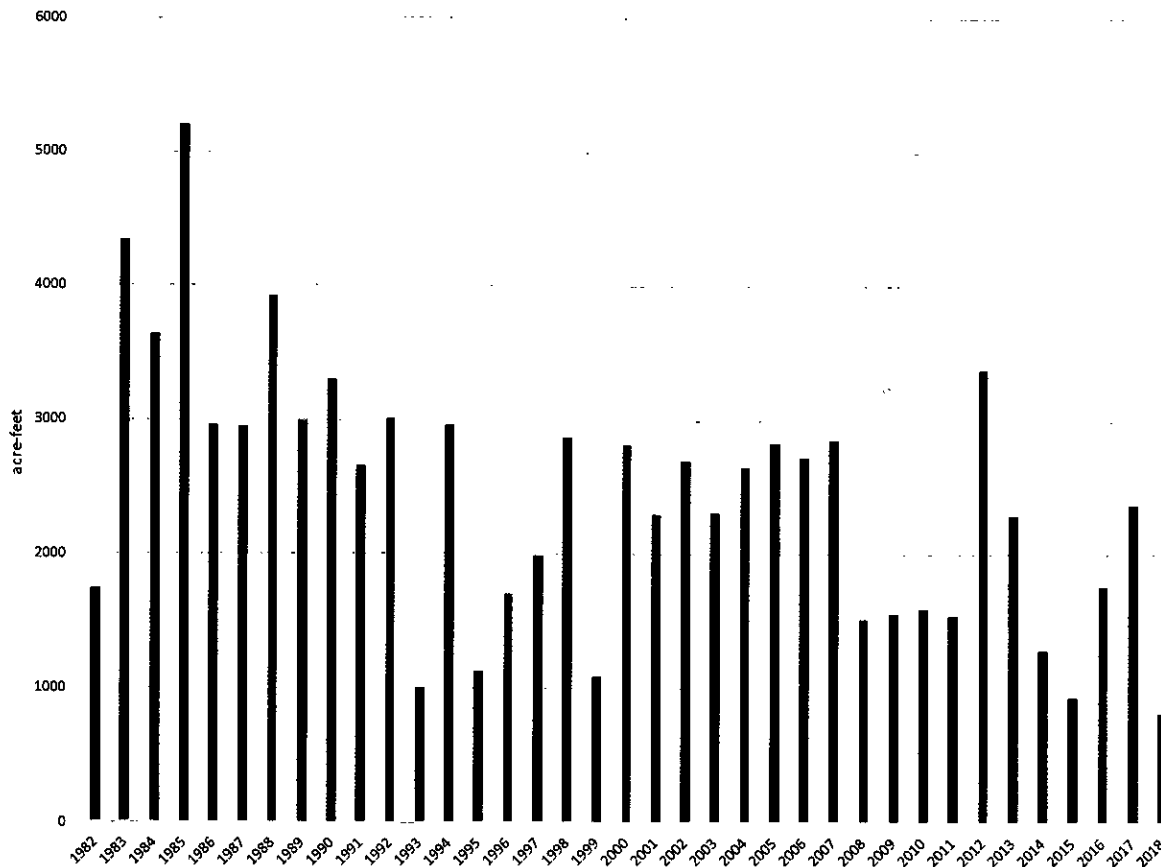


Figure 1: Reported irrigation pumpage for the Minnelusa aquifer (Water Rights, 1983-2019)

Balance

The estimated total average annual withdrawal from the Minnelusa aquifer is approximately 20,737.85 acre-feet per year. When compared to the estimated average annual recharge by Carter et al. (2001b) of 112,145 acre-feet per year, estimated average annual recharge exceeds average annual withdrawals. Additionally, recharge exceeds appropriative withdrawals by such an excessive amount that an increase in domestic use since Carter et al. (2001b) would be more than met by average annual recharge. However, not all of the recharge to or storage in the Minnelusa aquifer could possibly be available at any one location, therefore this general hydrologic budget simply demonstrates the Minnelusa aquifer is a vast water resource. There is also the need to consider a localized view of water availability in the Minnelusa. This could be done either through a localized hydrologic budget or consideration of area observation wells.

Localized Hydrologic Budgets

Carter et al. (2001b)

Carter et al. (2001b) analyzed the hydrologic budgets for the Madison and Minnelusa aquifer in the Black Hills region for water years 1987 to 1996. Carter et al. (2001b) utilized nine subareas as part of their analysis, with subareas constructed based on hydrologic flow paths to

minimize flow across boundaries. The proposed well location for this application is located within subarea four. The average hydrologic budget components for the Minnelusa for water years 1987 to 1996 for subarea four are shown in Table 1.

Table 1: Average Annual Hydrologic Budget Components for Subarea Four for Water Years 1987 to 1996 with Minnelusa Groundwater subarea inflow and outflow (modified from Carter et al., 2001b)

Combined Streamflow Recharge	Combined Precipitation Recharge	Minnelusa Groundwater Inflow	Minnelusa Groundwater Outflow	Combined Wells Withdrawals	Combined Artesian Springflow
33.7 cfs	5.7 cfs	0 cfs	4.7 cfs	7.2 cfs	26.2 cfs
24,398 acre-feet/year	4,127 acre-feet/year	0 acre-feet/year	3,403 acre-feet/year	5,213 acre-feet/year	18,968 acre-feet/year

Changes to the hydrologic budget in this subarea (i.e. an increase in well withdrawals), will result in the hydrologic budget rebalancing with either or both groundwater inflow from another subarea increasing or groundwater outflow from the subarea decreasing. When considering the appropriation requested by this application in relation to the hydrologic budget of this subarea, any change in subarea groundwater inflows or outflows to establish a new dynamic equilibrium for the subarea would be very subtle especially considering the large groundwater outflow for the subarea.

In this subarea, there are 58 water rights/permits completed into the Minnelusa aquifer. Average annual use for the Minnelusa aquifer in this subarea can be estimated utilizing the same methodology as the hydrologic budget for the entire aquifer and by assuming full development of the future use permit in the Minnelusa aquifer. This results in a conservative estimated average use for the Minnelusa aquifer in this subarea of approximately 6,900 acre-feet per year. Although this exceeds the estimated groundwater outflow (which is available for capture and appropriation) for the Minnelusa aquifer in this subarea four, the study's combination of recharge estimated for the Madison and Minnelusa aquifers makes comparison of average annual estimated recharge and average annual estimated withdrawals not possible. Therefore, emphasizing the need to consider additional information such as observation well data when considering water availability for the Minnelusa aquifer in subarea four from Carter et al. (2001b).

Long and Putnam (2002)

Long and Putnam (2002) conducted a water budget analysis for the Madison and Minnelusa aquifers in the Rapid City area for water years 1988 through 1997 as part of a conceptual model for these aquifers in the area. The conceptual model of Long and Putnam (2002) served as the basis for the later numerical model by Long and Putnam (2009) of the same area. The wellsite for this application is located within the Long and Putnam (2002) study area. The Minnelusa aquifer hydrologic budget components for the study area are summarized in Table 2. The study area for Long and Putnam (2002) is shown in Figure 2.

Table 2: Average Annual Minnelusa Budget Components Water Years 1988-1997 Long and Putnam (2002) Study Area

Table 2. Average Annual Minnelusa Budget Components: Water Years 1966-1997 Long and Poudre (2002) Study Area						
Inflows			Outflows			
Streamflow Recharge	Areal Recharge	Leakage between Madison and Minnelusa	Springflow	Water Use	Leakage to overlying units	Regional Outflow
6.5 cfs	6.1 cfs	7.6 cfs	0 cfs	3.4 cfs	2 cfs	11.2 cfs
4,706 acre-feet/year	4,416 acre-feet/year	5,502 acre-feet/year	0 acre-feet	2,462 acre-feet/year	1,448 acre-feet/year	8,108 acre-feet/year
Total Estimated Inflows 14,624 acre-feet/year			Total Estimated Outflows 12,018 acre-feet/year			

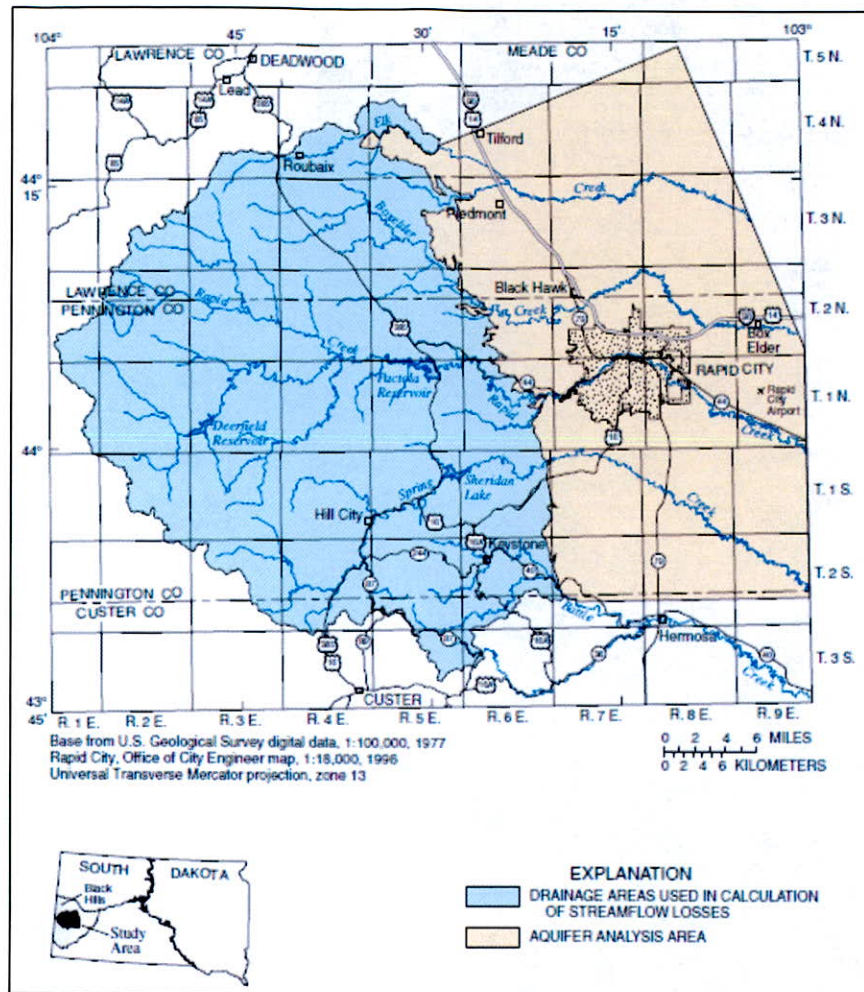


Figure 2: Rapid City Area conceptual model for the Madison and Minnelusa study area (modified from Long and Putnam, 2002)

In the Long and Putnam (2002) study area, there are currently 93 water rights/permits and one future use permit appropriating water from the Minnelusa aquifer (Water Rights, 2019a). Historically, water use by non-irrigation appropriations limited by instantaneous diversion rate has been less than 60% of full time pumping at the permitted authorized diversion rate. All of non-irrigation water rights/permits of the Minnelusa aquifer in this study area are limited by diversion rate. Average annual withdrawal for these water rights/permits is estimated at less than 8,035 acre-feet per year. Future Use Permit No. 439-2 reserves 3,367 acre-feet from groundwater, infiltration galleries, and Minnelusa and Madison Formation wells located along Rapid Creek for municipal use by Rapid City but does not attribute specific amounts to any of the listed water sources. Since there is no specific water source attributed to Future Use Permit No. 439-2, the potential for the entire amount being developed into the Minnelusa aquifer should be accounted for in the hydrologic budget of the aquifer. In evaluating future use permits, it is assumed the entire amount will be fully developed. There are currently seven water rights/permit for irrigation in the study area. Average annual reported pumping by those water rights/permits is 35.14 acre-feet. Average

annual use and future use to the Long and Putnam (2002) study area is estimated at less than 11,437 acre-feet per year. This is less than the estimated average annual inflows to the Minnelusa aquifer in the study area (14,624 acre-feet per year), therefore there is a reasonable probability that water is available for the diversion requested by this application.

Observation Wells

In determining the availability of unappropriated water for a permit application Administrative Rule of South Dakota 74:02:05:07 requires the Water Management Board to rely on 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 annual recharge.

The SD-DENR Water Rights Program monitors 23 observation wells completed into the Minnelusa aquifer. The nearest observation well to the well for this application is observation well PE-94A which is located approximately 2.2 miles south of the well location for this application. The hydrograph for observation well PE-94A is shown in Figure 3. Observation well PE-89B is located 3.6 miles to the north-northwest of the well location for this application, and the hydrograph for this well is shown in Figure 4. Observation well PE-64B is located 4.0 miles to the north of the well location for this application, and the hydrograph for this well is shown in Figure 5.

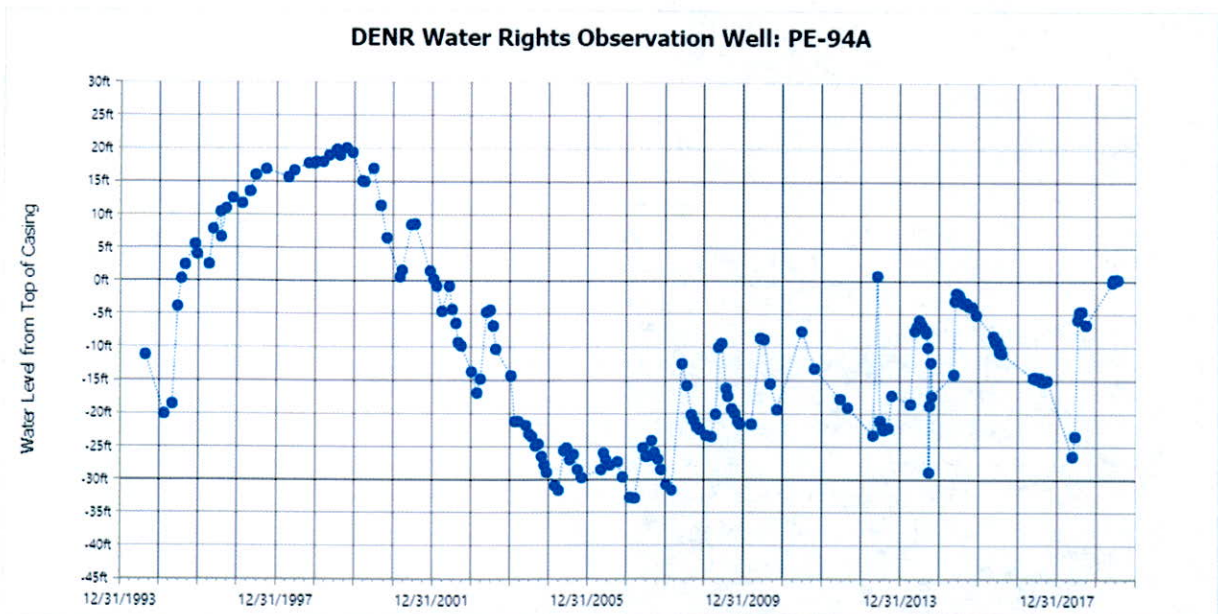


Figure 3: Hydrograph of observation well PE-94A (Water Rights, 2019b)

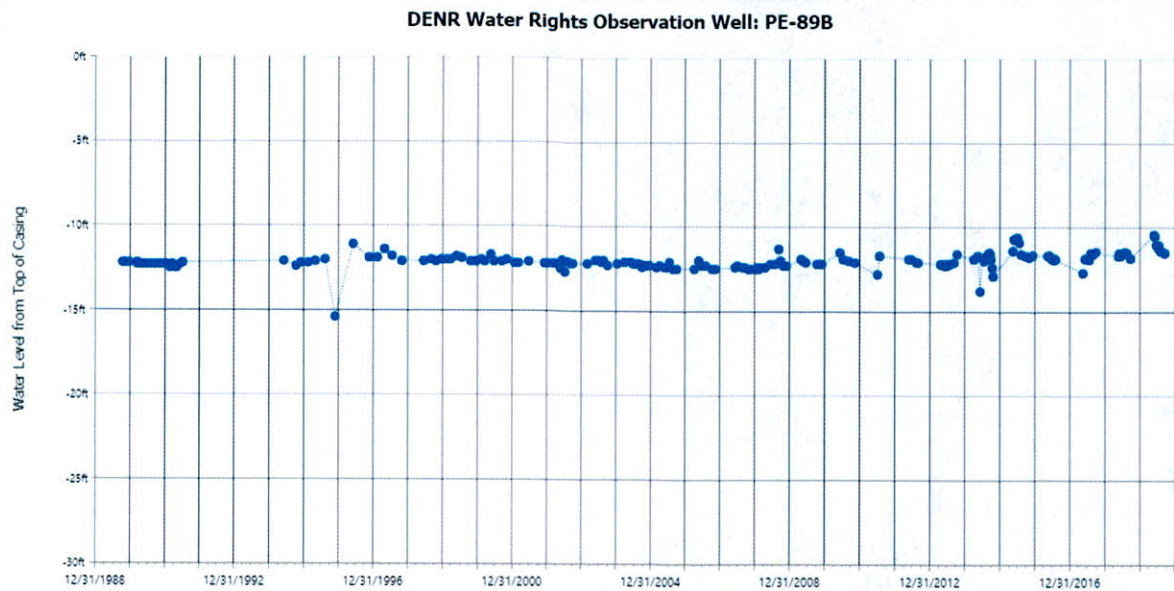


Figure 4: Hydrograph of observation well PE-89B (Water Rights, 2019b)

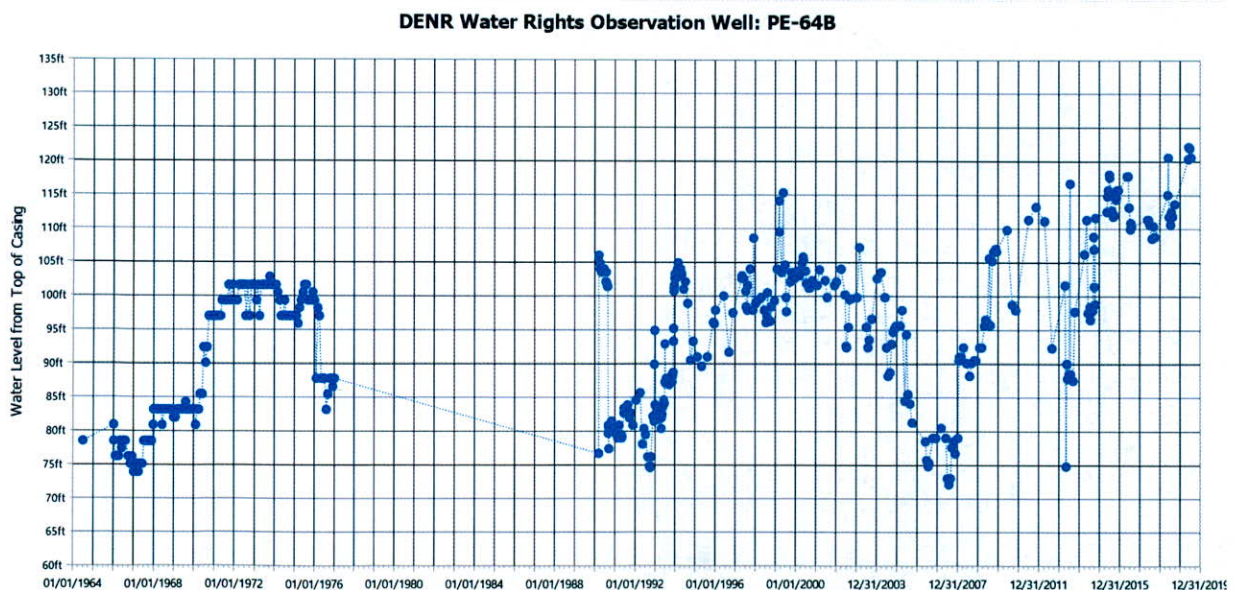


Figure 5: Hydrograph of observation well PE-64B (Water Rights, 2019b)

The hydrograph for observation well PE-89B shows fairly stable water levels throughout its period of record. This may be the result of the hydrologic connection between the Minnelusa aquifer and Canyon Lake located near observation well PE-89B as noted by Long and Putnam (2009). The hydrographs for observation wells PE-94A and PE-64B show seasonal and long-term water level variations as a result of climatic conditions. Any effects of pumping appear to be masked by the impact of climatic conditions in observation well PE-94A and PE-64B and the effect of Canyon Lake on water levels in observation well PE-89B. This demonstrates that natural conditions dominate; thus, there is a reasonable probability that there is water available for capture. Therefore,

there is a reasonable probability that there is unappropriated water available for the proposed appropriation of this application.

Existing Water Rights/Permits

The water rights/permits in the area of the wellsite for this application are shown in Figure 6 and summarized in Table 3. Water Right No. 1905-2 is for the well this application proposes to utilize, and it is subject to cancellation. The nearest water right/permit not associated with the well for this application is Water Right No. 1880-2 located approximately 0.25 miles to the southeast of the well site for this application (Water Rights, 2019a). There are domestic well completion reports on file with the SDDENR-Water Rights Program within two miles of this application that appear to be completed into the Minnelusa aquifer (Water Rights Program, 2019c).

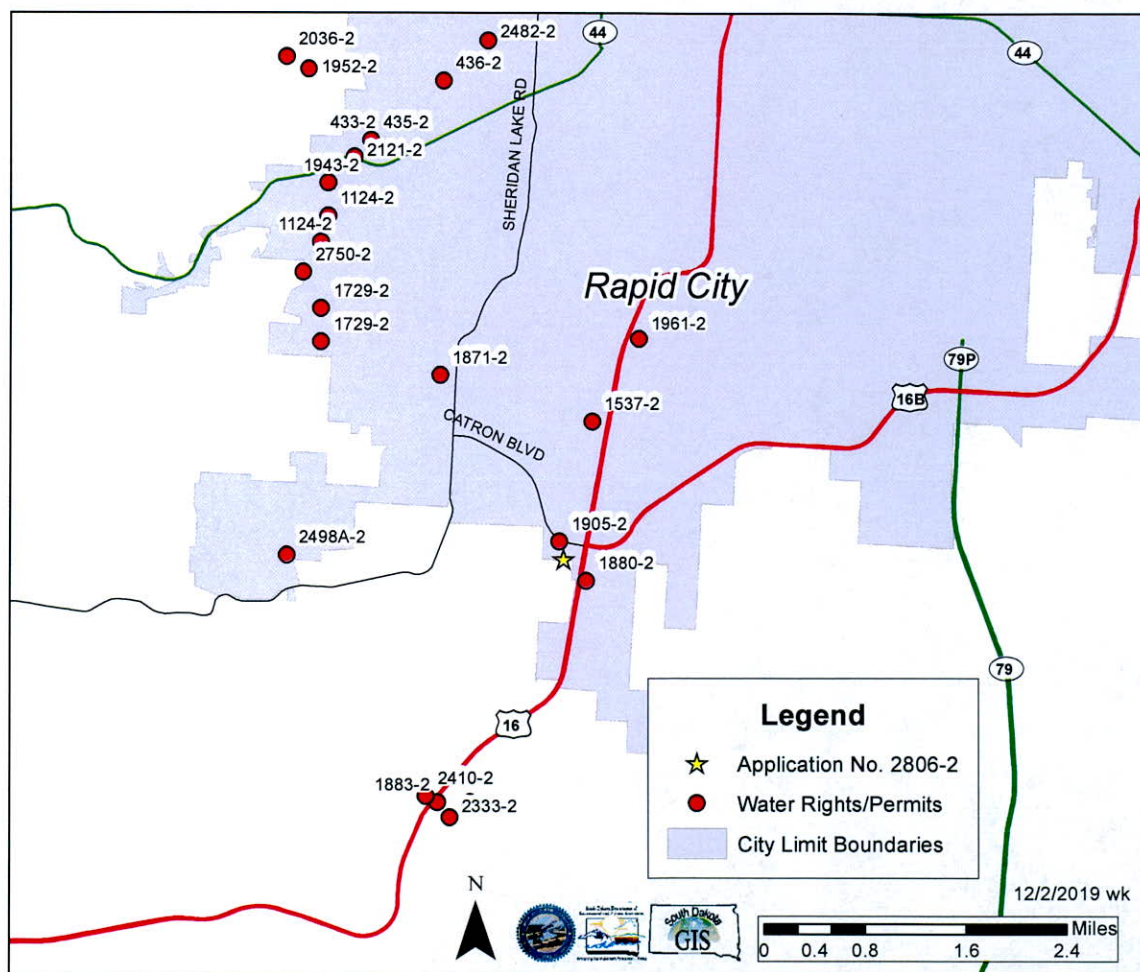


Figure 6: Water rights/permits currently authorized to water from the Minnelusa aquifer in the area of the well location for this application (Water Rights, 2019a)

Table 3: Summary of Water Rights/Permits in Figure 6 (Water Rights, 2019a)

Permit No.	Name	Use	Status	Rate	Acres
433-2	CITY OF RAPID CITY	MUN	LC	0.84	n/a
435-2	CITY OF RAPID CITY	MUN	LC	1.78	n/a
436-2	CITY OF RAPID CITY	MUN	LC	1.55	n/a
1124-2	CHAPEL LANE WATER CO	SHD	LC	0.56	n/a
1537-2	FIRST ASSEMBLY OF GOD	DOM	LC	0.09	n/a
1729-2	CARRIAGE HILLS WATER ASSN	SHD	LC	0.27	n/a
1871-2	VISTA HILLS WATER ASSOC	SHD	LC	0.09	n/a
1880-2	RUSHMORE WATERSLIDE INC	COM	LC	0.17	n/a
1883-2	REPTILE GARDENS	COM	LC	0.07	n/a
1905-2	BLACK HILLS JELLYSTONE RV	COM	LC	0.06	n/a
1913-2	HAPPY HOLIDAY RV RESORT	COM	LC	0.1	n/a
1943-2	CANYON LAKE RESORT	COM	LC	0.05	n/a
1952-2	DEPARTMENT OF THE MILITARY	DOM	LC	0.09	n/a
1953-2	MILITARY & VETERANS AFFAIRS	IRR	PE	0.17	13
1961-2	THOMAS N ST HILL II	COM	LC	0.08	n/a
2750-2	CHAPEL IN THE HILLS	IRR	LC	0.145	5.5
2036-2	DEPARTMENT OF THE MILITARY	INS	LC	0.029	n/a
2121-2	CITY OF RAPID CITY	MUN	LC	0.17	n/a
2333-2	BERDELL DUNWORTH	COM	LC	0.04	n/a
2410-2	FLYING T CHUCKWAGON	COM	LC	0.044	n/a
2482-2	SIOUX SAN HOSPITAL	INS	LC	0.078	n/a
2498A-2	COUNTRYSIDE HOMEOWNERS ASSOCIATION	IRR	LC	0.09	107
Mun- municipal, LC- license, SHD- suburban housing development, DOM- domestic, COM- commercial, IRR- Irrigation, INS- institutional					

In the past, the Water Management Board has recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. The Water Management Board has promulgated rules that allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure. An adversely impacted domestic well has been defined by the Administrative Rules of South Dakota 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;" In the case of Water Permit Application No. 2313-2 for the Coca-Cola Bottling Company of the Black Hills, the Water Management Board adopted findings of fact that noted that if the increased costs or decreased production as a result of the impacts of legitimate users on artesian head pressure could be considered an adverse impact it would conflict with SDCL 46-1-4 (Water Rights, 1995). SDCL 46-1-4 requires the water resources of the state be put to beneficial use to the maximum extent of which they are capable. The well completion report for the application indicated approximately 867 feet of artesian head pressure at the well site at the time of completion. Additionally, artesian head pressure at observation well PE-94A, located approximately 2.2 miles away, ranged from approximately 559.3 to 624.7 feet over the period of record. Given all the above, there is a reasonable probability the diversion proposed by this

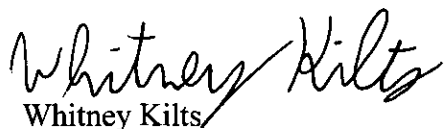
application, if approved, can be made without unlawfully impairing existing appropriative or domestic users with adequate wells.

Additional Considerations

There are several springs located in the Long and Putnam (2002) study area. The conceptual model of Long and Putnam (2002) noted that geochemical analysis on the largest spring complex in the study area (Jackson-Cleghorn) indicates a Madison aquifer origin, however in the numerical model a very small portion of the Jackson-Cleghorn spring complex was modeled as Minnelusa in origin (Long and Putnam, 2009). Naus et al. (2001) notes that City Springs in the study area is of Madison origin. Additionally, Long and Putnam (2002) attributed springflow primarily to the Madison aquifer in the study area based on the hydrologic information for the Madison and Minnelusa aquifers in the study area. However, in the numerical model of Long and Putnam (2009) the flow of Boxelder Springs was attributed to the Minnelusa aquifer. Anderson et al. (1999) indicates that a small portion of water in the Meadowbrook Galley along Rapid Creek is likely from a bedrock source but could not determine if the Madison or Minnelusa aquifer was the source. Additionally, Anderson et al. (1999) also notes a probable contribution from a bedrock source to the Girl Scout Gallery.

Conclusions

1. Water Permit Application No. 2806-2 proposes to appropriate water at a maximum diversion rate of 0.10 cfs from one well completed in the Minnelusa aquifer located in the SE ¼ NE ¼ Section 27 in T1N-R7E. The proposed use of the water is to maintain a 2.35 acre-feet storage pond for the irrigation of 25.5 acres located in the SE ¼ NE ¼ Section 27 and SW ¼ NW ¼ Section 26 all in T1N-R7E in Pennington County.
2. The well for this application is currently licensed under Water Right No. 1905-2 which is subject to cancellation.
3. Based on a review of the South Dakota hydrologic budget for the Minnelusa aquifer and the observation well information for the aquifer, there is a reasonable probability that unappropriated water is available in the aquifer for the applicant's proposed use as required by SDCL 46-2A-9.
4. There is a reasonable probability that this application, if approved, will not unlawfully impair existing water rights/permits or domestic users with adequate wells.



Whitney Kilts

SDDENR Water Rights Program

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- Water Rights. 2019a. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
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- Water Rights. 2019c. Well Completion Reports Database. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, December 16, 2019 10:34 AM
To: chris.anderson@blackhillscorp.com
Subject: Water Permit Application No. 2806-2
Attachments: 2806-2.pdf

Attached is the report, recommendation and information regarding the public notice for Water Permit Application No. 2806-2. As stated in the letter, someone needs to contact the Rapid City Journal to authorize publication and arrange for payment. It is scheduled to be published on December 27th. With the holiday, it is important for you to contact them ASAP. Paper copy is going in the mail today.

If you have questions, please contact me.

Karen Schlaak

SD DENR, Water Rights Program
(605) 773-3352



Affidavit of Publication

RECEIVED

STATE OF SOUTH DAKOTA

DEC 31 2019

County of Pennington

SS:

WATER RIGHTS
PROGRAM

Dec 27 L3747
NOTICE OF APPLICATION NO.
2806-2 to Appropriate Water

Notice is given that Black Hills Power Inc. c/o Scott A Buchholz, 7001 Mt. Rushmore Road, Rapid City SD 57702 has filed an application for a water permit to appropriate 0.10 cubic feet of water per second (cfs) from one well completed into the Minnelusa Aquifer (1400 feet deep) located in the SE 1/4 NE 1/4 Section 27 to irrigate 25.5 acres located in the (Lot 1 of C2B Addition) SE 1/4 NE 1/4 Section 27 and SW 1/4 NW 1/4 Section 26; all in T1N-R7E. Water

will be pumped from the well to maintain a 2.35 acre-foot storage pond. The pond is fed by stormwater and water levels will be maintained using the well. Water will be pumped from the pond at a rate up to 0.11 cfs to apply water to the irrigated acres. This site is located at the junction of Catron Boulevard and Highway 16 south of Rapid City.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2806-2 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 Eric Gronlund 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 January 6, 2020.

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.

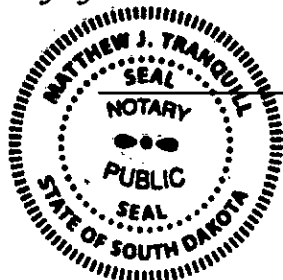
If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application 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 \$53.12)

Sheri Sponder being first duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, an employee of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, the owner and publisher of the RAPID CITY JOURNAL, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published in the English language, at and within an office maintained by the owner and publisher thereof, at Rapid City, in said Pennington County, and has been admitted to the United States mail under the second class mailing privilege for at least one year prior to the publication herein mentioned; that the advertisement, a printed copy of which, taken from said Rapid City Journal, the paper in which the same was published, is attached to this sheet and made a part of this affidavit, was published in said paper once each day .. for one successive day, the first publication there of being on the 27th day of Dec 2019 that the fees charged for the publication there of are 53 dollars and 12 cents.

Sheri Sponder

Subscribed and sworn to before me this 27th day of December, 2019.



Matthew J. Tranquill

Notary public

December 5, 2025

My commission expires

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, December 16, 2019 10:28 AM
To: RCY Legals (legals@rapidcityjournal.com)
Subject: 2806-2, Black Hills Power Inc
Attachments: 2806-2public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on December 27, 2019.

Black Hills Power Inc, c/o Scott Buchholz, 7001 Mt. Rushmore Rd, Rapid City SD 57702 (605 721-2783) 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
SD DENR, Water Rights Program
(605) 773-3352





**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 NEWSPAPER RIGHT AWAY.**

December 16, 2019

Black Hills Power Inc
c/o Scott A Buchholz
7001 Mt. Rushmore Rd
Rapid City SD 57702

Dear Mr. Buchholz:

Water Permit Application No. 2806-2 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 Rapid City Journal printed at Rapid City SD (Ph # 605 394-8336). 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,

Eric Gronlund /11/15

Eric Gronlund
Natural Resources Engineer
(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.

Instruction to Newspaper - Publish the Notice on December 27, 2019. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2806-2 to Appropriate Water

Notice is given that Black Hills Power Inc. c/o Scott A Buchholz, 7001 Mt. Rushmore Road, Rapid City SD 57702 has filed an application for a water permit to appropriate 0.10 cubic feet of water per second (cfs) from one well completed into the Minnelusa Aquifer (1400 feet deep) located in the SE 1/4 NE 1/4 Section 27 to irrigate 25.5 acres located in the (Lot 1 of C2B Addition) SE 1/4 NE 1/4 Section 27 and SW 1/4 NW 1/4 Section 26; all in T1N-R7E. Water will be pumped from the well to maintain a 2.35 acre-feet storage pond. The pond is fed by stormwater and water levels will be maintained using the well. Water will be pumped from the pond at a rate up to 0.11 cfs to apply water to the irrigated acres. This site is located at the junction of Catron Boulevard and Highway 16 south of Rapid City.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2806-2 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 Eric Gronlund 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 January 6, 2020.

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_____.

Schlaak, Karen

From: Schlaak, Karen
Sent: Friday, January 10, 2020 8:20 AM
To: Anderson, Chris
Subject: Water Permit No. 2806-2
Attachments: 2806-2.pdf

Good morning Chris,
Attached is a copy of Water Permit No. 2806-2 as approved by the Chief Engineer. Paper being mailed today.

Karen Schlaak
SD DENR, Water Rights Program
(605) 773-3352





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

JAN 10 2020

Black Hills Power Inc
c/o Scott A Buchholz
7001 Mt Rushmore Rd
Rapid City SD 57702

Dear Mr. Buchholz:

Enclosed is Water Permit No. 2806-2 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,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

2806-2

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

Date 1/12/2021

TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM: Black Hills Power, Jennifer Landis SVP Human Resources

(name)
7001 Mt. Rushmore Rd

(address)
Rapid City, SD 57702

(city, state, zip)

605-221-2227

(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. 2806-2 states that the water use system is to be constructed by
01/06/2025 , and water is to be put to beneficial use by 01/06/2029 .
(date) (date)

The water use system was completed on 06/01/2020 .
(date)

Applying the water to beneficial use was completed on 06/01/2020 .
(date)

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

(signature)

*electronically signed by
7-98 Jennifer Landis -
The signature did not
print.
Jm*



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 2806-2

I have this day **July 20, 2021** made a thorough examination of the water use system constructed by **Black Hills Power Inc., 7001 Mt. Rushmore Rd, Rapid City, SD 57702** of Permit No. **2806-2**, bearing the priority of **10/11/2019** authorizing the diversion of **.10 cfs** cu. ft. per second of the water from 1 well for **irrigation** purposes in **Pennington** County.

Inspection contact & relationship to permit holder, if applicable: **Rod Hubbard, Facilities Manager**
605-721-2177

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Taylor Drilling
- 2) No. of Wells 1 (10/84)
- 3) Depth(s) 1,400 feet (Minnelusa Aquifer)
- 4) Well log is available Yes

Casing:

- 1) Diameter 7 inches 0 – 600 ft, 5 ½ inches 600 – 1,300
- 2) Length 1,300 feet
- 3) Type Steel

Screen:

- 1) Type open hole
- 2) Length 100 ft. (1,300 to 1,400 ft)
- 3) Static water level 400 ft. @ completion, 308 ft. in 2016 install of new pump

Pump:

- 1) Make Gould
- 2) Model 35GS100
- 3) Size 4"
- 4) Capacity 45 GPM
- 5) Horsepower rating 10 hp

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

- 1) Type HDPE
- 2) Size 2 inches
- 3) Length 1,890 feet

C. Works used to apply water to beneficial use:

The well provides supplemental irrigation water to irrigate 7.7 acres of landscaped area around the Black Hills Corporation facility. Potable water for the facility is provided by the City of Rapid City. Irrigation water is stored in a bentonite lined pond of 2.35 ac-ft. storage volume which receives storm runoff from approximately 15 acres of the facility property. The well is controlled by a float switch located in the pond allowing for additional irrigation water as needed.

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes:
- 2) Exceptions to compliance are: none

E. Condition and Location:

1. The system is in excellent condition with the point of diversion located as follows:

**SE ¼ NE¼ S 27 T1N R7E (2,604 ft. south and 420 ft. west of the NE corner section 27),
N 44.016883° W 103.253573°**

2. The works are capable of diverting and conveying to the place of use 0.10 cu. ft. per second (45 gpm) of water which is to be used for sprinkler irrigation. Water has been put to beneficial use to the maximum extent as follows:

Section 27 T1N R7E

SE ¼ NE ¼ 5.8 acres

Section 26 T1N R7E

SW ¼ NW ¼ 1.9 acres

comprising a total of 7.7 acres of land and the license should be issued for 0.10 cfs.

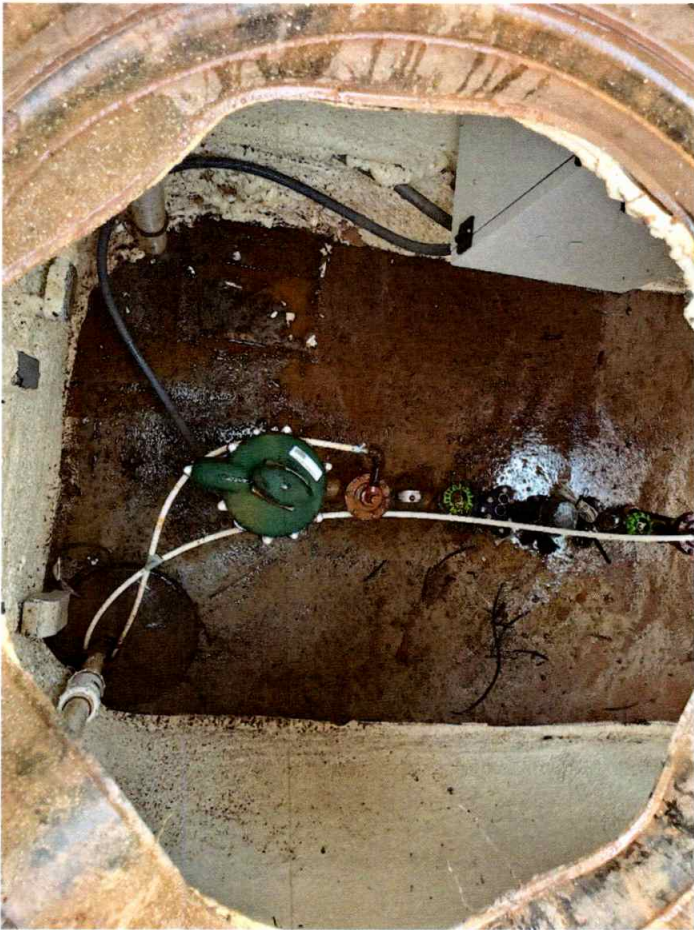
3. All structures, wells and lands on map – **Well and pond only**

F. Comments or other permits associated with the project: none



Steven Quissell
Water Rights Inspector
Department of Agriculture and Natural Resources
Water Rights Program

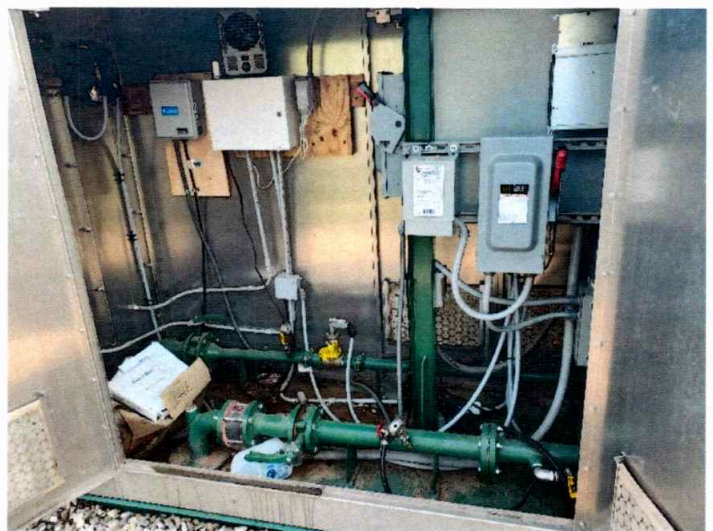
Date Report Completed: 4/21/2021



**Well head and appurtenances including flow meter in pit (10/84)
variable frequency drive controller @ upper right**

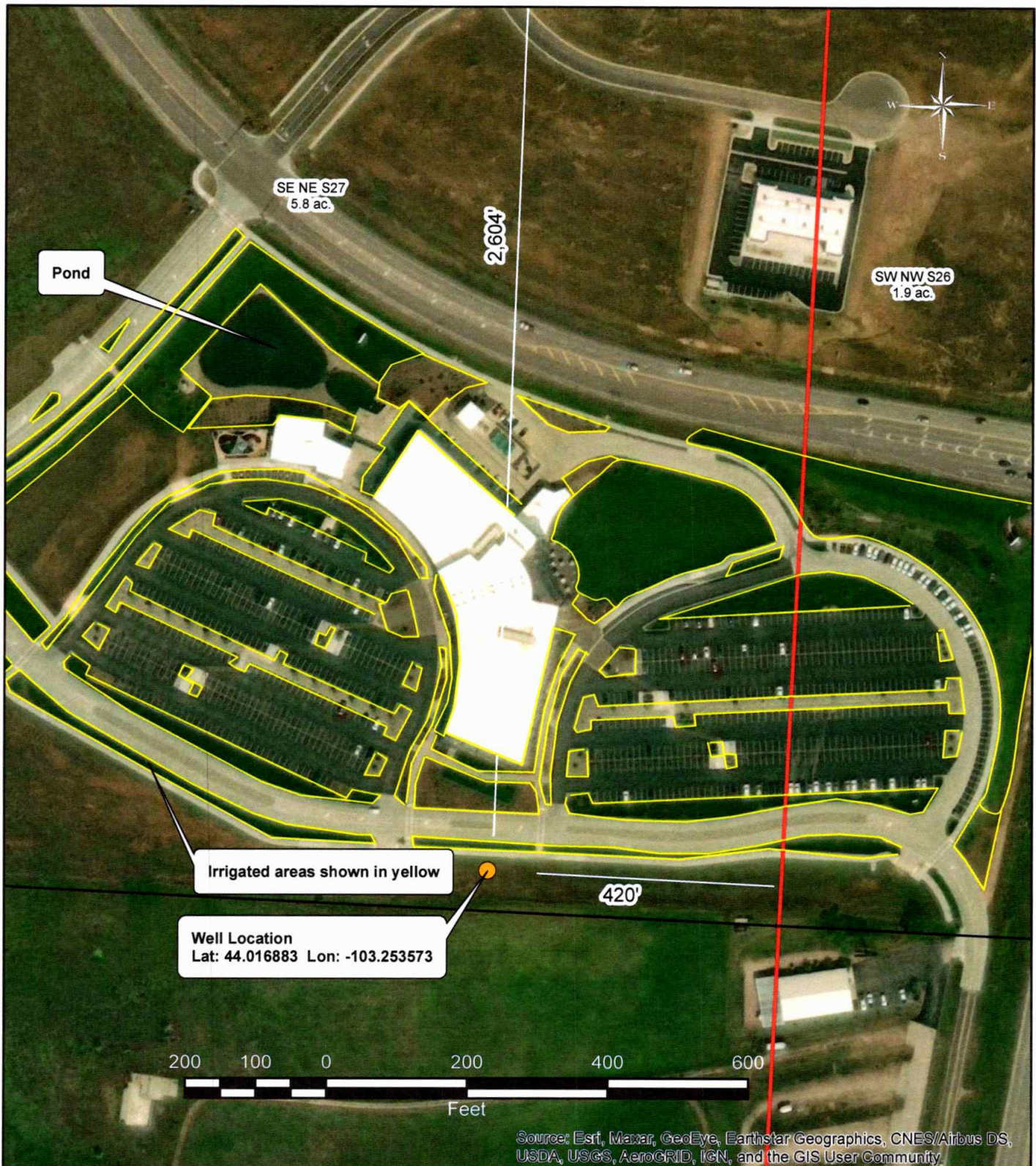


Storage pond with aerator



Irrigation manifolds and controls

Water Right No. 2806-2
Black Hills Power Inc.
7/20/2021

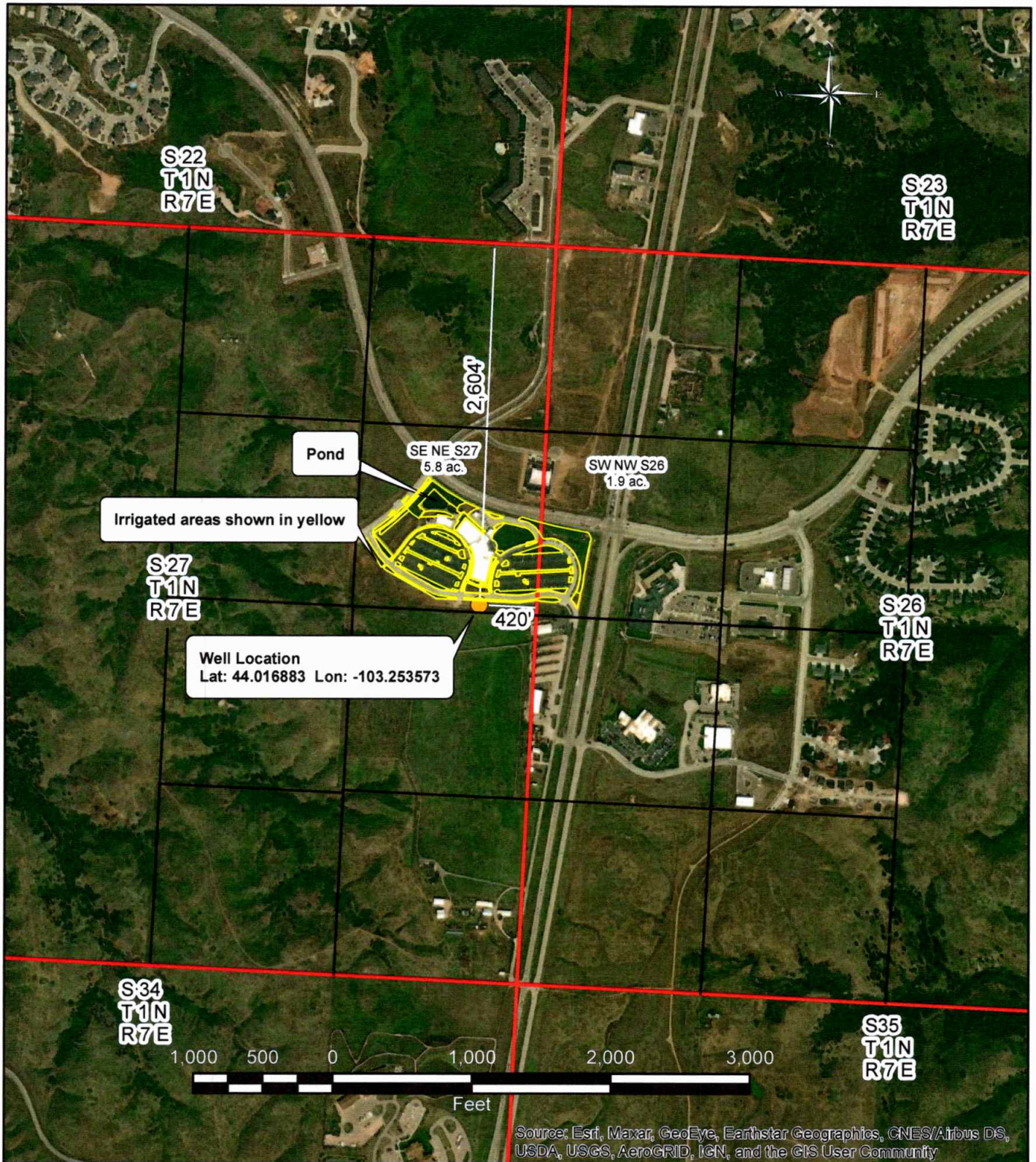


Steven Quissell

Steven Quissell
Water Rights Inspector
Department of Agriculture and Natural Resources
Water Rights Program



Water Right No. 2806-2
Black Hills Power Inc.
7/20/2021



Steven Quissell
Water Rights Inspector
Department of Agriculture and Natural Resources
Water Rights Program





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUL 22 2021

2806-2

Rod Hubbard, Facilities Mgr
Black Hills Power Inc
7001 Mt Rushmore Rd
Rapid City SD 57702

Dear Mr. Hubbard:

Enclosed is Water License No. 2806-2. This is the final water right document completing the process of obtaining a Water Right. Included with the 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.

As 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. 2806-2**

(1) Black Hills Power Inc., 7001 Mt Rushmore Rd., Rapid City SD 57702 made Application No. 2806-2, October 11, 2019 for a water permit to divert 0.10 cubic feet of water per second from ground water, one well (Minnelusa Aquifer), Pennington County, South Dakota for irrigation purposes. Permit No. 2806-2, with a priority date of October 11, 2019 was approved January 6, 2020 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before January 6, 2025 and for the application to beneficial use of said water on or before January 6, 2029.

The Permit holder submitted a "Notice of Completion of Works and Application of Water to Beneficial Use" on January 12, 2021. The "Notice" stated the water use system was completed the water placed to beneficial use on June 1, 2020.

(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 0.10 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 2,604'S and 420'W of the NE corner of Section 27, T1N, R7E (SE ¼ NE ¼)
Latitude 44.016883, Longitude -103.253573

Water is pumped from the well to a pond (2.35 ac/ft storage) located in the SE ¼ NE ¼ Section 27. The pond also receives storm runoff from the facility property. Water is pumped from the pond to the acreage as needed for irrigation purposes.

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate the acreage described below:

Section 27, T1N, R7E	Section 26, T1N, R7E	
SE ¼ NE ¼ 5.8 acres	SW ¼ NW ¼ 1.9 acres	Total 7.7 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Black Hills Power Inc., 7001 Mt Rushmore Rd., Rapid City SD 57702 the holder and/or owner of Water Right No. 2806-2 is issued a license to appropriate water, the right to use 0.10 cubic feet of water per second from ground water, one well (Minnelusa Aquifer) with a priority date of October 11, 2019 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. 2806-2 and subject to the following qualifications:

- The well approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right 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.
- This Water Right 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

JUL 22 2021

date

