

WATER PERMIT NO. 1997-1

Name of Applicant: Bear Butte Valley Water Inc.

Address: PO Box 351, Sturgis SD 57785 Phone: 605 206-0703

Amount of Water Claimed: 0.89 cfs Total Acres: NA

Source of Water Supply: groundwater (one existing well)

Water to be used for: rural water system use County: Meade

Type of Waste Disposal System:

Location: approximately 3 miles east of Sturgis

PRIORITY Date Received: 5-26-20 Application/License Fee: \$ 700

Corrected Application Received: Period of Annual Use: January 1 – December 31

Remarks: Increase diversion rate on the well authorized by Water Right No. 1928-1

Diversion Point: NW 1/4 SW 1/4 Sec 5-T5N-R6E

Land to be Irrigated: NA

Depth of Well: 2910 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared-by: Steven Quissell

	⊗	5			

Reviewed and the Number Assigned on: 5-27-20

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA WATER PERMIT NO. 1997-1

Date of first receipt of application May 26, 2020.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1997-1 to Bear Butte Valley Water Inc., c/o Bruce Weyrich, President, PO Box 351, Sturgis SD 57785 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. 1997-1 appropriates an additional 0.89 cubic feet of water per second (cfs) from an existing well. Water Right No. 1928-1 authorizes 0.51 cfs from one well completed into the Madison Aquifer (3,623 feet deep) located in the NW 1/4 SW 1/4 Section 5-T5N-R6E. This permit and Water Right No. 1928-1 will authorize a total diversion rate of 1.40 cfs and up to a combined annual volume of 200 acre-feet of water. This site is located approximately 3 miles east of Sturgis SD.
2. The water appropriated shall be used for the purpose of rural water system use serving users in Meade and Lawrence Counties 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 of approval of Permit No. 1997-1 is August 10, 2020.
5. The date from which applicant may claim right is May 26, 2020 (for 0.89 cfs additional appropriation. The 200 acre-feet and 0.51 cfs retain the April 20, 2012 priority date established by Water Right No. 1928-1).
6. One-fifth of the construction is to be completed on or before February 10, 2023.
7. All construction is to be completed on or before August 10, 2025.
8. Water is to be put to beneficial use on or before August 10, 2029.
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. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1997-1 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1997-1 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 46-5-37.1 and ARSD 74:02:01:37.
2. The well will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits 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.
3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer.

(continued)

Water Permit No. 1997-1
Bear Butte Valley Water Inc.
Page 2

4. Water Right No. 1928-1 and Water Permit No. 1997-1 appropriate up to 200 acre feet of water annually.

WATER MANAGEMENT BOARD

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

AUG 17 2020

date



PAID

MAY 26 2020

Ck# 1901

RECEIVED

MAY 26 2020

WATER RIGHTS
PROGRAM

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>1997-1</u>	(office use only) Hydrologic Unit <u>10120202</u>
	Basin <u>Belle Fourche</u>	
	Newspaper <u>Faith Independent</u>	
	<u>Black Hills Pioneer</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. 1928-1

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

Increase to match pumping capacity of well, to be used for
system expansion (adding new customers)

1. Name to Appear on Water Permit Bear Butte Valley Water, Inc
Mailing Address P.O. Box 351 Sturgis SD 57785
(Address) (City) (State) (Zip Code)
Phone _____ Mobile 605-206-0703 Email dennisk.bbvwater@gmail.com

2. Amount of water claimed 0.89 *CFS or 200 **GPM and 200 ***AF or _____ 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)

3. Source of water supply Madison Formation groundwater

4. Location of point of diversion SE 1/4 NW 1/4, Sec. 5, T.5N, R.6E, B4M County Meade
(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? _____

(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Meade and eastern Lawrence

6. Annual period during which water is to be used January 1 - December 31

7. 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)

BBVW is an active, growing Rural Water System. This application
is for an increase in water right to allow for system expansion
(adding customers).

I, Bruce Weger President, the applicant, certify under
Name of Person Title (if applicable)

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

Supplemental Information

(type or print)

1. Well Information

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

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

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

For either Existing or Proposed Wells:

c) Well Depth (required) 3623 2910 Depth to Top of Water Bearing Material ____ Depth to Water from Surface 165'

d) Distance to nearest domestic well on applicant's property NA Property owned by others 1/2 Mile

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) ____ Year Constructed ____

c) Connected to the City of ____ Sanitary System

3. Dugout Information

a) Surface Dimensions ____ Depth ____

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

4. Water Storage Dams

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

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

b) Freeboard ____

c) Crest Width ____

Crest Length ____

d) Height ____

e) Primary Outlet Capacity ____

If pipe, diameter ____

f) Secondary Spillway Capacity ____

Spillway Width ____

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

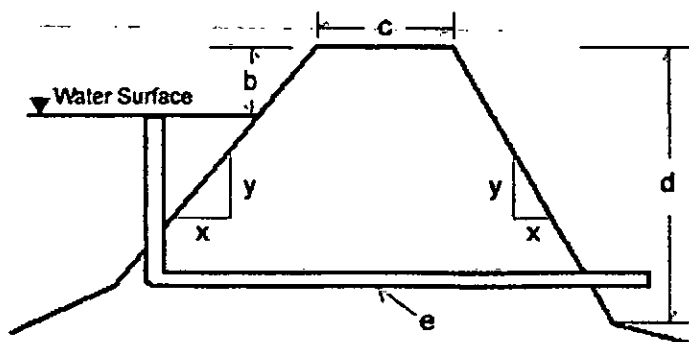
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

i) Storage ____ Acre Feet

j) Drainage Area Above Dam ____ Acres



WELL (642)
(Record of Installation)

Well Owner Bear Butte Valley WATER

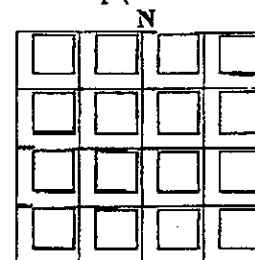
Address _____

County MEAD

Program _____

GPS _____

Section Map (mark with X)



Sec _____ T _____ R _____

Farm ID No. _____ Notes _____

Planning

Planned by: _____ Date planned: _____

Miles to other watering facilities: _____ Acres served by well: _____

Driller's Completion Report
(attach driller's log)

Type of well: Drilled ☒ Dug ☐ Driven ☐ Depth of well, feet: 3623

Depth of producing aquifer, feet: 3095 Thickness of producing aquifer, feet: 3600

Artesian pressure at surface, feet: _____ Artesian flow, gallons per minute: _____

Casing: Type STEEL Size, inches 16 3/4 Length, feet 0-50
0-1310
1300-3095

Depths casing cemented: 0 to 3095 0-50
0-1310
1300-3095 to _____

Screen/Perforated casing: Type open hole Diameter, inch 6 7/8 Opening size, inch 1/2

Screen/Perforated casing depth location: 3095 to 3623

Gravel pack: Thickness, inches _____ Length, feet _____

Well yield, gallons per minute 450 gpm Pumping lift, feet 650 feet

Pump: Type Submersible Size 100 hp

Notes: _____

Driller's Certification

I certify that the above information, including the attached "log of well," is a true and factual record of the job performed by me. The well has been completed in accordance with Natural Resources Conservation Service Specification SD-32.

Driller Signature

Woston Engineering, Inc.
[Signature] #604

Date

7/28/14

Driller's address:

Woston Engineering, Inc.
P.O. Box 260
Upton, WY 82730

Inspection

The well was drilled at the agreed location in a workmanlike manner. The well is protected from contamination by surface water.

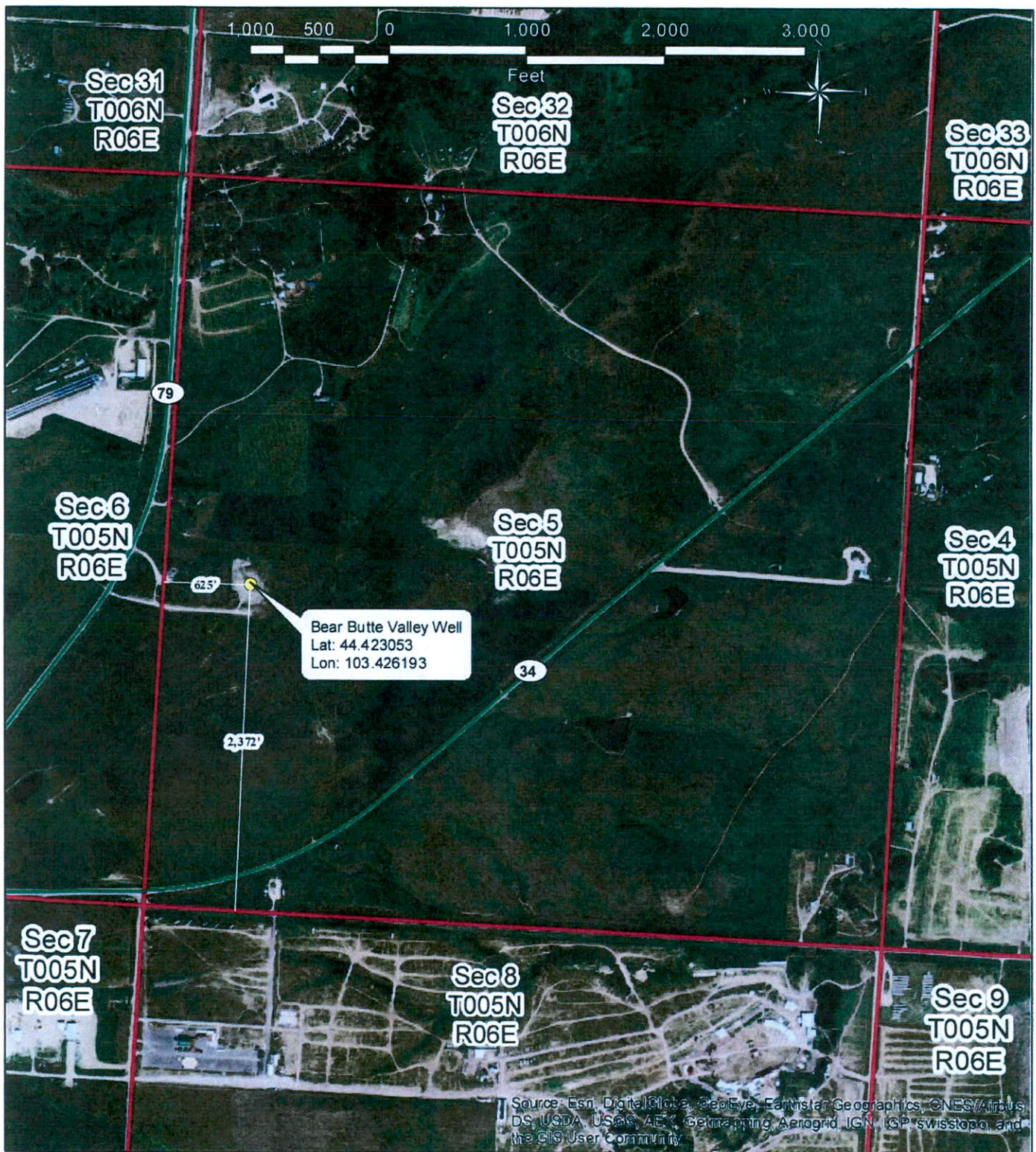
Inspector's signature

Date

Inspection and other notes:

Manufacturer and markings on well casing, pipe, and equipment:

Water Right #1928-1
Bear Butte Valley Water Inc.
5/31/2017



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program



RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Environment and Natural Resources

Date May 26, 2020

RECEIVED OF Bear Butte Valley Water Inc. PO Box 351 Sturgis SD 57785

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

Fee for Application for Permit No. <u>1997-1</u> 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>1997-1</u>	\$200.00
Fee for Filing Transfer Form _____	\$
Fee for _____	\$
Fee for Issuing New Well Driller's License No. _____	\$
Fee for Renewal of Well Driller's License No. _____	\$
Fee for Issuing Well Pump Installer's License No. _____	\$
Fee for Renewal of Well Pump Installer's License No. _____	\$
(Any Other Work Provided by Law) TOTAL	\$700.00

By Eric Gronlund
Chief Engineer
vm



530992349

ANNUAL REPORTDomestic Nonprofit Corporation
SDCL 47-24-6, 59-11-24Please Type or Print Clearly in Ink
Please submit one Original
Make payable to the SECRETARY OF STATE

Filing Fee: \$10

Total Fee: \$10

Secretary of State
500 E. Capitol Ave
Pierre, SD 57501-5070
(605) 773-4845**2020**
FILING YEAR

1. Business ID and Name:

NS014020
BUSINESS ID**BEAR BUTTE VALLEY WATER, INC.**
BUSINESS NAME2. The jurisdiction under whose law it is formed **SOUTH DAKOTA**

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

Actual Street Address

20550 HWY 79
STURGIS, SD 57785-6305

Mailing Address

PO BOX 351
STURGIS, SD 57785-6305

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.

(a) The South Dakota Noncommercial Registered Agent's name

Name **Clair Rowett**

Actual Street Address in this State

20373 GRAVEL ROAD
STURGIS, SD 57785

Mailing Address in this State

20373 GRAVEL ROAD
STURGIS, SD 57785

5. The names and addresses of its principal officers.

Title	Name	Address
President	Bruce Weyrich	20080 145TH AVENUE, STURGIS, SD, 57785
Vice President	Ed Blair	19599 Bear Butte Road, Sturgis, SD 57785
Secretary	Bob Kaufman	12324 Crackerjack Road, Whitewood, SD 57793
Treasurer	Bob Kaufman	12324 Crackerjack Road, Whitewood, SD 57793

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

Name	Address
Clair Rowett	20373 Gravel Road, Sturgis SD 57785
Randy Hallock	1745 Davenport Street, Sturgis, SD 57785
Brook Loobey	12907 Big Horn Road, Whitewood, SD 57793
RICH GROSCH	19958 AVALANCHE ROAD, WHITEWOOD, SD, 57793



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).

04/19/2020

Dated

Email (Optional)

CLAIR ROWETT

Signature of an Authorized Person

CLAIR ROWETT

Printed Name

B0136-7530 04/19/2020 2:44PM Rec'd by SD SOS

Schlaak, Karen

From: Gronlund, Eric
Sent: Friday, May 8, 2020 10:30 AM
To: Duvall, Ron; Schlaak, Karen
Subject: RE: 1928-1, Bear Butte Valley Water

I again spoke with Mr. Kaufman. He indicated their annual use in 2018 and 2019 was 87 & 92 acre feet respectively. The expansion will increase annual volume by 80 ac-ft so the total will be 172 ac-ft. He is going to put an annual volume on the application (to reflect total use under 1928-1 and this new application) at 180 ac-ft/year. Thought I should document this discussion in an email so when the application comes in you will know how the number was arrived at and that it represents total use.

Also, they are afforded a volume greater than the 180 ac-ft under existing 1928-1 so this is just additional diversion rate authority. Therefore the fee is \$500 + \$200 for a total of \$700.

From: Gronlund, Eric
Sent: Thursday, May 7, 2020 9:22 AM
To: Duvall, Ron <Ron.Duvall@state.sd.us>; Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: RE: 1928-1, Bear Butte Valley Water

Mr. Kaufman called back regarding the fee for the application.

They have WR 1928-1 for 0.51 cfs which is not quantified with an annual acre foot amount (369 ac-ft). They will be applying for and additional 171 gpm from this well. I stated if they do not exceed 489 ac-ft (369 + 120) the fee is \$500 + \$200 for a total of \$700. I am certain the annual volume will not be over that amount.

From: Gronlund, Eric
Sent: Friday, April 17, 2020 8:58 AM
To: Duvall, Ron <Ron.Duvall@state.sd.us>; Schlaak, Karen <Karen.Schlaak@state.sd.us>
Cc: McMath, Genny <Genny.McMath@state.sd.us>
Subject: 1928-1, Bear Butte Valley Water

Bob Kaufman called. He is secretary/treasurer for the system.

Originally permitted for 1.0 cfs and licensed in 2017 based on Steve Quissell's inspection.

Mr. Kaufman state the well is capable of producing at a rate of 576 gpm. I stated an application will need to be filed for the incremental increase in the diversion rate and we'll also want them to quantify their annual volume (estimate on the high side). He indicated he will be filing the application soon as this issue came up when dealing with Rural Development (presumably they have a grant request pending).

Genny – change the contact person to Mr. Kaufman. The address of PO Box 351 remains the same.

Thanks

Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us

Schlaak, Karen

From: dennisk.bbwater@gmail.com
Sent: Tuesday, May 26, 2020 12:14 PM
To: Schlaak, Karen
Subject: [EXT] Re: water permit application for Bear Butte Valley Water Inc.

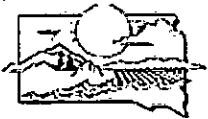
Section 5 is correct. The longitude and latitude are also correct. Our rented office probably sits on the section line.

Sent from Windows Mail

From: Schlaak, Karen
Sent: Tuesday, May 26, 2020 11:01 AM
To: dennisk.bbwater@gmail.com

We received the water permit application to increase the diversion rate on Water Right No. 1928-1 for Bear Butte Valley Water Inc. The application states the well is located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 6-T5N-R6E. Based on the map for Water Right No. 1928-1, this well is located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 5-T5N-R6E (map attached). Do you agree with this change on the application?

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



Drennon, Kim

From: Drennon, Kim
Sent: Monday, July 13, 2020 8:35 AM
To: dennisk.bbvwater@gmail.com
Subject: RE: [EXT] Re: Water Permit Application Well Depth

Thank you, that clears things up!
-Kim

From: dennisk.bbvwater@gmail.com <dennisk.bbvwater@gmail.com>
Sent: Friday, July 10, 2020 3:44 PM
To: Drennon, Kim <Kim.Drennon@state.sd.us>
Subject: [EXT] Re: Water Permit Application Well Depth

Here is what I have. We have called it 3100' to the Madison and then to the bottom at 3600' or 3700'. This is probably a lot closer to what you have I hope.

Sent from Windows Mail

From: Drennon, Kim
Sent: Friday, July 10, 2020 2:22 PM
To: dennisk.bbvwater@gmail.com

Dear Mr. Kinslow,

I'm the engineer doing the technical review for Bear Butte Valley Water Inc's Water Permit Application No. 1997-1. In the application on Form 2A, it says that the well depth is 2,910 ft, but that doesn't match up with some records we have on file. Would you please let me know where you got the information regarding your total well depth?

Regards,

-Kim Drennon
Natural Resources Engineer
SD DENR Water Rights Program
(605) 773-4060



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1997-1, Bear Butte Valley Water, 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. 1997-1, Bear Butte Valley, Inc., c/o Bruce Weyrich, President, PO Box 351, Sturgis SD 57785.

The Chief Engineer is recommending APPROVAL of Application No. 1997-1 with a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) although evidence is not available to justify issuing this permit without a 20 year term limitation, there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and, 4) it is in the public interest with the following qualifications:

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1997-1 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1997-1 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 46-5-37.1 and ARSD 74:02:01:37.
2. The well will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits 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.
3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer.
4. Water Right No. 1928-1 and Water Permit No. 1997-1 appropriate up to 200 acre feet of water annually.

See report on application for additional information.

Eric Gronlund, Chief Engineer
July 22, 2020

**Report to the Chief Engineer on
Water Permit Application No. 1997-1**

Bear Butte Valley Water, Inc.
10 July 2020

Water Permit Application No. 1997-1 proposes to appropriate an additional 0.89 cubic feet of water per second (cfs) from one well completed into the Madison aquifer (3,623 feet deep) located in the NW ¼ SW ¼ Section 5-T5N-T6E for use by a rural water system serving users in Meade and Lawrence Counties. The well this application proposes to utilize is an existing well authorized under Water Right No. 1928-1. This application, if approved, and Water Right No. 1928-1 will authorize a total diversion rate of 1.40 cfs and up to a combined annual volume of 200 acre-feet of water. This site is located approximately 3 miles east of Sturgis, South Dakota.

Aquifer: Madison (MDSN)

Hydrogeologic characteristics

The Madison Group is a group of formations deposited during the late Devonian and early-to-middle Mississippian geologic periods (1). In the Black Hills, the two formations in the Madison Group are known as the Englewood Limestone, which lies below, and the Pahasapa (or Madison) Limestone, which lies above (1). The Madison Group extends over 19,115,560 acres in South Dakota west of the Missouri River (2). The Madison Group also extends into eastern South Dakota, Nebraska, Wyoming, Montana, and North Dakota (3). The Madison aquifer consists of the saturated portions of the Madison Group that are permeable enough to deliver water at a rate that is useful to domestic and appropriative water users. Water in the Madison aquifer flows mostly via secondary porosity features such as fractures and solution cavities (4). The transmissivity of the Madison aquifer can range significantly, and transmissivity of the aquifer is highly variable from one place to the next (5). The Madison aquifer is generally under confined conditions, although near the area of its outcrop in the Black Hills, it is under unconfined conditions (6) (5).

The applicant did not submit a well or test hole completion report with their application, but one is available in the administrative file for Water Right No. 1928-1. The well driller encountered Madison Limestone from 3,050 ft to 3,600 ft below grade, and the Englewood Formation from 3,600 ft to 3,623 ft below grade. The driller cased the well above 3,095 ft below grade and left the well as an open hole below. The static water level at the time of drilling, October 16, 2014, was 197 ft below grade. The applicant submitted a total well depth of 2,910 ft on Form 2A in their application, but later corrected it to correspond with the well completion reports on file with the Water Rights Program (7). The well for this application is under confined conditions.

Applicable South Dakota Codified Law (SDCL)

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is reasonable probability unappropriated water is available for the application, that the proposed diversion can be developed without unlawful impairment of existing rights, and that the proposed use is a beneficial use and in the public interest. This report will analyze the availability of unappropriated water and possibility of developing the application without unlawful impairment of existing rights, only.

Pursuant to SDCL 46-6-3.1, 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 exception allows water distribution systems proposing to withdraw from a formation that is older than or stratigraphically lower than the Greenhorn Formation to be granted a permit even if it is probable that average annual withdrawals from that formation will exceed average annual recharge. The proposed source of water is older and stratigraphically lower than the Greenhorn Formation and the proposed use is a water distribution system as defined by SDCL 46-1-6(17), so it is not necessary for a hydrologic budget to find recharge exceeds or meets withdrawals from the Madison aquifer. However, hydrologic budgets will be included in this analysis for the Chief Engineer's and Water Management Board's information.

Pursuant to SDCL 46-2A-20, all permits for withdrawal from the Madison aquifer in Butte, Fall River, Custer, Lawrence, Meade and Pennington counties must have a 20-year term limit unless the Water Management Board determines at a hearing that 1) sufficient information is available to determine whether any significant adverse hydrologic effects on the supply of water in the Madison aquifer would result if the proposed withdrawal were approved and 2) the information shows that there is reasonable probability that issuance of the proposed permit would not have a significant adverse effect on nearby Madison aquifer wells and springs. This application proposes to withdraw water from the Madison aquifer in one of the counties listed in SDCL 46-2A-20, so SDCL 46-2A-20 applies to it.

Hydrologic budgets

Since this application is somewhat near the outcrop of the Madison Group, it is possible to withdraw too much water from a localized area while the general hydrologic budget remains balanced. There is also a groundwater flow divide in the Madison aquifer around the Black Hills (8). Therefore, it is appropriate to analyze the hydrologic budget of the Madison aquifer in general for South Dakota and to analyze the hydrologic budget available for the local area.

Statewide hydrologic budget

Statewide recharge

Recharge to the Madison aquifer is mainly by infiltration from streamflow and precipitation over the outcrop of the aquifer (4). Some recharge may also occur via groundwater inflow from the Deadwood aquifer (5). There are several reports available containing estimates of recharge to the Madison aquifer. Rahn and Gries (9) measured discharge from large springs flowing from the Paleozoic aquifers and estimated an average discharge rate of approximately 140,000 acre-feet per year. Woodward-Clyde Consultants (10) used precipitation and other hydrologic data to estimate an upper bound to the recharge rate of the Madison aquifer to be 400,000 ac-ft/yr (out of approximately 509,000 ac-ft/yr of precipitation) and assumed the Rahn and Gries (9) estimate of spring discharge was an adequate lower boundary for the recharge rate. The Water Rights Program has cited the estimates by Rahn and Gries (9) and Woodward-Clyde Consultants (10) in previous studies, but newer research is available. Carter et al. (4) used detailed precipitation and streamflow data to estimate a combined average annual recharge rate to the Madison and Minnelusa aquifers to be 249,260 ac-ft/yr and estimated approximately 55% of that recharge goes to the Madison aquifer. Therefore, the best available estimate of recharge to the Madison

aquifer is 137,093 ac-ft/yr. This estimate is near the low end of the boundaries posited by previous reports, but it is based on more years of streamflow data, higher-resolution precipitation data, and more accurate assumptions about precipitation infiltration.

Statewide discharge

Natural discharge from the Madison aquifer is by evapotranspiration from the outcrop when the hydraulic head of the aquifer is near land surface at the outcrop, flow to springs and seeps, and groundwater flow to aquifers that are hydrologically connected when the hydraulic head of the Madison aquifer is higher than the hydraulic head of the hydrologically connected aquifers (8). When natural discharge occurs, the Water Management Board has generally considered it available for appropriation. Withdrawals are by domestic and appropriative wells. Carter et al. (8) estimated domestic use was less than 2% of all withdrawals for their period of study. Given that small percentage, domestic use is negligible for this hydrologic budget. There are 155 active water rights/permits authorizing withdrawals from the Madison aquifer and 9 future use permits (Table 1) reserving 12,809 ac-ft/yr from the Madison aquifer (11).

Table 1: Future use permits reserving water from the Madison aquifer (11)

Permit No:	Name/Business:	County:	Use	Priority Date:	Amount Reserved (ac-ft/yr)	Comments
369-1	City of Belle Fourche	LA	MUN	12/10/1958	620	
2086-2	City of Rapid City	PE	MUN	05/18/1989	4,075	
439-2	City of Rapid City	PE	MUN	09/22/1956	3,367	
1872-1	City of Spearfish	LA	MUN	11/13/2006	2,704	
2560-2	Fall River Water Users District	FR	RWS	05/16/2005	358	
2560A-2	Fall River Water Users District	FR	RWS	05/16/2005	0	Additional area
2560B-2	Fall River Water Users District	FR	RWS	05/16/2005	0	Additional area
2580-2	Southern Black Hills Water System	FR	RWS	03/02/2006	1,474	
1833-2	Weston Heights Home Owners	MD	RWS	02/18/1983	211	
Total					12,809	
LA – Lawrence, FR – Fall River, MD – Meade, PE – Pennington						
MUN – Municipal, RWS – Rural Water System						

In addition to approved water rights/permits and future use permits, other applications are pending approval. Water Permit Application No. 2585-2 for the Southern Black Hills Water System proposes to appropriate 1,600 ac-ft/yr from the Madison aquifer, and is deferred until its potential impacts to cave pools in Wind Cave National Park and to Beaver Creek are assessed (11). Water Permit Application No. 2685-2 for Powertech (USA) Inc. proposes to appropriate 888.8 ac-ft/yr from the Madison aquifer, and is held in abeyance until other permitting processes are completed (12). Future Use Permit Application No. 1995-1 seeks to reserve 1,300 ac-ft/yr from the Madison aquifer. Water Permit Application No. 2812-2 seeks to appropriate 25 ac-ft/yr for a water distribution system from one well located in SE ¼ SE ¼ Section 22-T2N-R5E.

Of the 155 active water rights/permits, 32 include irrigation as an authorized use in their permit, although some of those 32 include multiple uses (11). Most irrigation water rights/permits are required to report their withdrawals each year, although a few are not due to their irrigation method (11). Irrigation questionnaire summaries available for the period of record (1982-2019) indicate that average irrigation withdrawal reported for the Madison aquifer is 815 ac-ft/yr (13). However, the summaries do not account for appropriations by irrigation water rights/permits that

are not required to report and those that are too new to have fully developed their permits, nor do they require permit users to report their non-irrigation use. Following the method used by Kilts (14), irrigation questionnaires for each of the active water rights/permits withdrawing from the Madison aquifer were analyzed as shown in Table 2. Irrigation water rights/permits that are not required to report their withdrawals or that have reported their withdrawals for 10 years or less are assumed to withdraw 2 ac-ft/yr per acre licensed/permitted. Three irrigation water rights licensed to withdraw from the Madison aquifer have reported no withdrawal for more than 10 years (13). They are assumed to withdraw no water on average. If, in the future, they did withdraw water, their average annual withdrawal would still be low given the number of years they withdrew no water. Permits that allow multiple uses other than irrigation are assumed to withdraw at their maximum diversion rate 60% of the time. Water Right No. 1885-1 is assumed to withdraw at its maximum diversion rate 100% of the time because the sum of its estimated withdrawal for irrigation and estimated non-irrigation use is greater than is physically possible at the licensed diversion rate. The total estimated average annual withdrawal from the Madison aquifer by permits allowing irrigation, other than the four permits described in the following paragraph, is 8,577 ac-ft/yr (Table 2).

Water Right/Permit Nos. 1096-1, 1096A-1, 1496-1, and 1670-1 are all authorized to withdraw from one well located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 20 and a dam located in NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 29; all in T9N-R3E (11). Water Right Nos. 1096-1, 1096A-1, 1670-1 authorize diversion of water for irrigation use and Water Right No. 1096A-1, and Water Permit Nos. 1496-1 authorize diversion of water for rural water system use and allow withdrawal year-round for rural water system use (11). Documentation in the administrative file for Water Right No. 1670-1 indicates the well was not valved such that it could be shut off when flow was not being put to the beneficial use allowed by the four water rights/permits above. A letter dated September 9, 1998, submitted as part of the public comments prior to approval of Water Right No. 1670-1, indicated that when water is not used for the uses listed in the four water rights/permits above (irrigation or rural water system use), the water is used for fish and wildlife propagation. The person writing that letter indicated they would prefer the Water Management Board not to order the well to be shut off when not used for irrigation or rural water system withdrawals (11). It is likely the well continues to flow uncontrolled, so at the flow rate listed in Water Right No. 1096A-1 of 1.33 cfs, that well withdraws approximately 964 ac-ft/yr from the Madison aquifer for those four water rights/permits.

While Water Right No. 1650-1 does not require the water right holder to report annual withdrawals and is allocated no acreage, it provides supplemental water supply from a flowing well for Water Right No. 1231-1 (11). Water Right No. 1231-1 permits a 110 ac-ft dam to provide water for commercial livestock and irrigation of 134 acres (11). Water Right No. 1650-1 allows for direct irrigation from a Madison aquifer well of up to 2 acre-feet per acre for the land permitted by Water Right No. 1231-1 (11). Kilts (14) estimated Water Right No. 1650-1 withdraws 55.9 ac-ft/yr on an average based on irrigation reported for Water Right No. 1231-1.

Water rights/permits that are limited to an annual volume withdrawal less than if they diverted water continuously are assumed to withdraw their full volume limit and will be referred to as "volume-limited" from this point onward. The 29 volume-limited water rights/permits withdrawing from the Madison aquifer other than this application and Water Right No. 1928-1, which will be counted separately, appropriate 20,279 ac-ft/yr (11). There are 92 water rights/permits withdrawing from the Madison aquifer that are limited only by maximum

Report on Water Permit Application No. 1997-1

instantaneous diversion rate (11). Water Right No. 1709-1 is licensed to withdraw from multiple aquifers, but only up to 0.089 cfs from the Madison aquifer. Water Permit No. 1954-1 was permitted to withdraw 0.23 cfs from the Madison or Minnelusa aquifer, so its full diversion rate is assumed to come from the Madison aquifer for this hydrologic budget. All water rights/permits limited only by maximum diversion rate are conservatively assumed to withdraw at the full diversion rate they are allowed to withdraw from the Madison aquifer 60% of the time, which accounts for 17,554 ac-ft/yr (11).

Table 2: Irrigation reported/estimated and non-irrigation use estimated for water rights/permits with irrigation as one beneficial use (11) (13).

Permit No.	Name/Business	Priority	Diversion rate (cfs)	Acres Licensed/ Permitted	Average Report (ac-ft/yr)	No. of Years of Irrigation Reports	Est. Avg. Irrigation (ac-ft/yr)	Est. Non-irr. Use (ac-ft/yr)	Total Est. Withdrawal (ac-ft/yr)
2773-2	Arrowhead Country Club	07/27/2017	1.11	100	0	2	200.0	0	200.0
1096-1	Bar Bar V Livestock LLC	04/16/1976	1.88	216.00	65.3	29	*	*	*
1670-1		06/09/1998	3.61	253.00	51.7	22	*	*	*
1635-1	Black Hills Nat'l Cemetery	04/02/1990	0.82	54.50	96.4	24	96.4	356	452.8
1452-1	Black Hills State College	12/19/1988	3.33	25.44	17.9	31	17.9	1447	1465.4
1096A-1	Butte Meade Sanitary Dist	04/16/1976	1.33	0.00	Does not report		*	*	*
2458-2	City of Rapid City	03/30/2001	0.8	107.00	104.7	19	104.7	0	104.7
2313-2	Coca-Cola Bottling	04/08/1994	0.33	3.00	7.4	25	7.4	143	150.9
1899-1	Davis Ranches Inc	08/25/2008	1.43	100.00	0.0	11	0.0	0	0.0
2673-2	Diocese of Rapid City	05/27/2011	0.12	7.00	8.8	7	14.0	0	14.0
1009-1	Donald F/Ann J Brady	02/01/1974	0.78	53.73	31.6	38	31.6	0	31.6
1185-1		01/18/1979	0.38	22.52	107.0	38	107.0	***	107.0
2286-2	Donald Konechne	04/28/1993	0.1	38.50	10.9	26	10.9	0	10.9
1707A-1	Elkhorn Ridge @ Frawley Ranches LLC	01/06/2000	3.705	100.00	Does not report		200.0	1610	1810.5
1707E-1		01/06/2000	0	0.00	2.3	13	**	**	**
1931-1		08/17/2012	0.17	3.30	3.2	7	6.6	74	80.5
1650-1	Foothill Land & Cattle LLC	04/03/1997	0.89	0.00	Does not report		*	*	*
1945-1	Frawley Ranches LLC	02/10/2014	1.11	265.00	45.7	6	530.0	0	530.0
1858-1	Glencoe Camp Resort II LLC	03/08/2006	0.86	34.00	0.0	14	0.0	374	373.8
2593-2	Hart Ranch Development	06/15/2006	0.49	72.50	14.0	13	14.0	213	226.9
1911-2	Hart Ranch Development Co	09/27/1984	0.88	124.00	124.6	26	124.6	383	507.1
1725-2	Janice R Crowser	08/20/1980	1.07	75.10	1.1	21	1.1	0	1.1
1923-1	Jim Montieith	02/15/2011	0.11	3.00	1.1	8	6.0	48	53.8
858-2	John & Heidi McBride	02/05/1965	9.36	655.75	7.1	36	7.1	0	7.1
1885-1	John T & Veronica Widdoss	04/09/2007	0.11	22.00	15.2	3	44.0	36	79.7
1223-1	Montana Dakota Land LLC	03/10/1981	0.67	263.00	205.6	38	205.6	0	205.6
1960-1	One Diamond Inc	04/11/2016	1.28	150.00	123.8	4	300.0	556	856.4
1363-1	Spearfish Canyon Cntry Cl	09/15/1986	0.9	80.10	60.7	33	60.7	0	60.7
2106-2	Stuart Rice	06/06/1990	0.08	2.80	0.9	27	0.9	35	35.7
1842-1	Tom C Davis	04/05/2005	0.44	330.00	0.0	15	0.0	0	0.0
2741-2	Tubbs Land & Cattle LLC	08/20/2018	3.34	567.00	0.0	1	1,134.0	0	1134.0
419-2	Wind Cave National Park	12/29/1955	0.15	6.00	Does not report		12.0	65	77.2
* Discussed in text									
** Water Permit No. 1707E-1 is an extension of time to place Water Permit No. 1707A-1 to beneficial use									
*** Reports all use types in irrigation report									

Before this application had been submitted, the Water Rights Program had analyzed Water Right No. 1928-1 as only limited by its maximum permitted pump rate, which was 0.51 cfs. If the applicant was running their pump 60% of the time, they would have withdrawn approximately

222 ac-ft/yr. If this application is approved, it will result in less withdrawals from the Madison aquifer by Bear Butte Valley Water, Inc. than the Water Rights Program had previously estimated (15). However, in previous technical reviews, the total withdrawal estimated was less than it is now (15). That is because since the last application was reviewed, the SD DENR Water Rights/Permits File Database has been updated to reflect that Water Right No. 1709-1 and Water Permit No. 1954-1 withdraw from the Madison aquifer.

Balance of statewide hydrologic budget

The best available estimate of recharge to the Madison aquifer in South Dakota is 137,093 ac-ft/yr (4). Appropriations from the Madison aquifer are summarized in Table 3. The estimated average annual appropriative withdrawals and reservations from the Madison aquifer in South Dakota is 64,253 ac-ft/yr, including this application. Therefore, based on the statewide hydrologic budget, there is reasonable probability unappropriated water is available for this application.

Table 3: Summary of withdrawals discussed in the Statewide Discharge section, rounded to the nearest 1 ac-ft/yr.

Withdrawal type:	Amount (ac-ft/yr)
Future Use	12,809
Water Permit Application No. 2585-2	1,600
Water Permit Application No. 2685-2	889
Future Use Permit Application No. 1995-1	1,300
This application and Water Right No. 1928-1	200
Water Permit Application No. 2812-2	25
Water Right/Permit Nos. 1096-1, 1096A-1, 1496-1, and 1670-1	964
Water Right No. 1650-1	56
Other Irrigation	8,577
Annual Volume Limit	20,279*
Diversion Rate Limit	17,554
Total Withdrawals	64,253
* Other than this application and Water Right No. 1928-1	

Local hydrologic budget

Figure 1 shows the study area boundaries in relation to this application and the outcrop of the Madison Group (8) (16) and observation wells completed into the Madison aquifer in that area (6). Carter et al. (8) analyzed the hydrologic budgets of the Madison and Minnelusa aquifers in the Black Hills region for water years 1987 to 1996. They divided the region into nine subareas with the intent to minimize groundwater flow across subarea boundaries. The well location for this application is in Subarea 2 (8). Table 4 shows the average hydrologic budget for Subarea 2 for water years 1987 to 1996 both in the units used by the authors (cfs) and in ac-ft/yr (8). The total recharge for the Madison and Minnelusa aquifers estimated by Carter et al. (8) for Subarea 2 is 27,457 ac-ft/yr and Carter et al. (4) estimated approximately 55% of the recharge goes to the Madison aquifer. Therefore, the average annual recharge to the Madison aquifer in Carter et al. (8) Subarea 2 is 15,101 ac-ft/yr. There are 38 water rights/permits and one future use permit appropriating water from Carter et al. (8) Subarea 2. (11). Using the same methods described in the statewide discharge section, the estimated annual appropriation for Carter et al. (8) Subarea 2, including this application, is currently 10,282 ac-ft/yr. Therefore, there is reasonable

probability unappropriated water is available for this application within the boundaries of Carter et al. (8) Subarea 2.

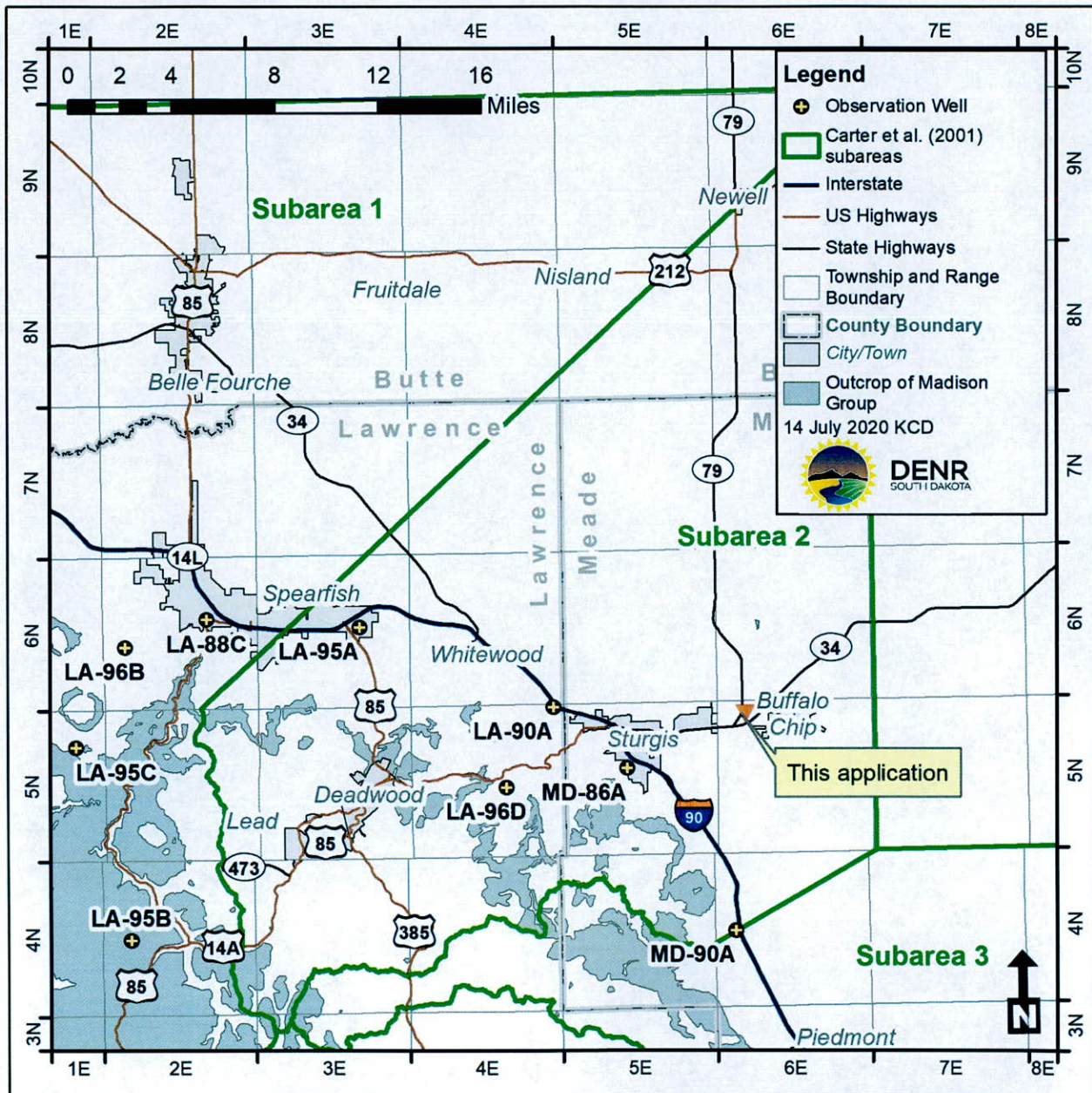


Figure 1: Study boundaries for local Madison aquifer hydrologic budgets (8) (16) and Water Rights Program observation wells (6).

Table 4: Average hydrologic budget for the Madison and Minnelusa aquifers modified from Carter et al. (8) for Subarea 2 for water years 1987 through 1996.

		Inflows			Outflows		
		Streamflow Recharge	Precipitation Recharge	Groundwater inflow	Artesian Spring-flow	Wells	Groundwater outflow
Subarea2	cfs	27.1	10.8	0.0	0.0	3.7	34.2
	ac-ft/yr	19,633	7824	0	0	2,680	24,776

Observation well data

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires the Water Management Board to rely upon observation well measurements in addition to other data to determine the availability of unappropriated water. The DENR Water Rights Program maintains 25 observation wells completed into the Madison aquifer (6). The nearest DENR observation well to the well for this application is Observation Well MD-86A, located approximately 5.2 miles southwest of the well for this application (6). Figure 2 shows water level measurements from Observation Well MD-86A over the period of record (6). The Madison aquifer's behavior at Observation Well MD-86A is representative of the Madison aquifer's behavior elsewhere in the aquifer when it is relatively near the outcrop of the Madison Group but under confined conditions (6). In general, water levels rise during wet periods and decline during dry periods (17), indicating that the climate impacts water levels in the aquifer more than withdrawals. Therefore, based on observation well analysis, there is reasonable probability unappropriated water is available for this application.

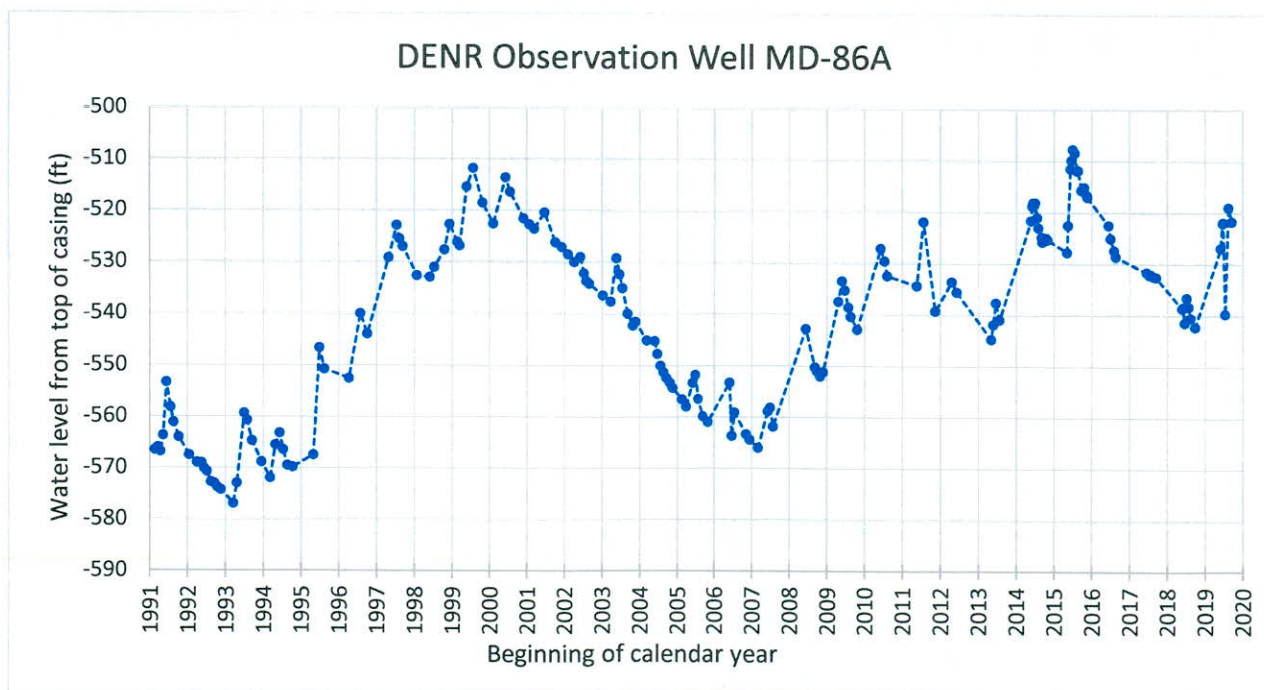


Figure 2: Water level measurements from DENR Observation Well MD-86A (6)

Potential for unlawful impairment of existing water rights

Appropriative and domestic well users

The nearest Madison aquifer water right/permit to this application is either Water Right No. 1858-1, located approximately 0.7 miles west of the well for this application or Water Right No. 1780A-1, located approximately 0.7 miles southeast of the well for this application. (11). The nearest domestic wells on file with the DENR that are likely completed into the Madison aquifer are located approximately 4 miles to the southwest of the well for this application (18). Figure 3 shows water rights/permits near the well for this application and Table 5 describes water rights/permits shown in that Figure (11) (16). Precise drawdown effects of the well cannot be determined without an aquifer performance test, especially in an aquifer with transmissivity values that vary as much as the Madison aquifer does. In order to place waters of the state to maximum beneficial use, SDCL 46-6-6.1 does not necessarily protect artesian head pressure as a means of water delivery. In order to protect domestic well users, the Water Management Board has defined an adversely impacted domestic well in ARSD 74:02:04:20(6) 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”

Some additional drawdown is likely to occur. However, DENR observation wells near high-capacity wells such as those for Rapid City have not experienced adverse impacts historically (6). There are no complaints on file with the DENR regarding well interference in the Madison aquifer in Meade County (19). Therefore, there is reasonable probability this application can be developed without impairment of domestic wells or senior water rights/permits. However, out of an abundance of caution, the applicant should control their withdrawals so that nearby adequate wells are not adversely impacted.

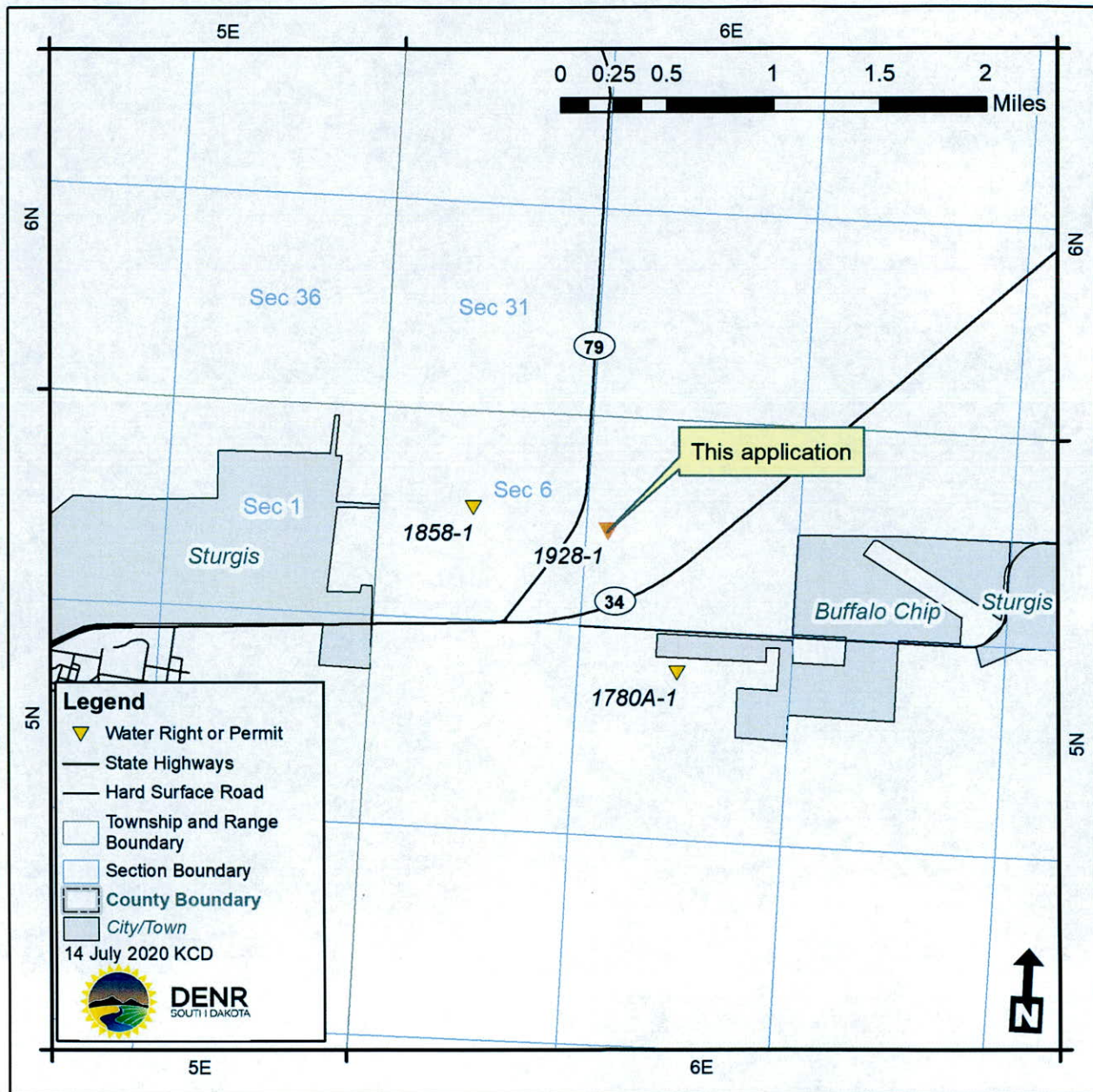


Figure 3: Nearby Madison aquifer water rights/permits and observation well MD-94A (11)

Table 5: Water rights/permits shown in Figure 3 (11)

Permit No	Status	Name/Business	Priority	Diversion Rate (cfs)	Annual Volume Limit (ac-ft/yr)
1780A-1	License	Rod Woodruff	11/19/2002	0.444	17
1858-1	License	Glencoe Camp Resort II, LLC	03/08/2006	0.860	N/A
1928-1	License	Bear Butte Valley Water, Inc.	04/20/2012	1.000	N/A

Springs

The nearest major artesian spring to the well location for this application that potentially relies on the Madison aquifer is Elk Creek Springs, located approximately 11 miles to the south of it (20). Upon considering the deferral of Water Permit Application No. 2585-2 for the Southern Black Hills Water System, the Water Management Board adopted a conclusion of law stating in part, "...The only protection South Dakota law provides when considering an application for an underground water permit for flow from an artesian spring is under the public interest criteria" (21). Given the distance between the well site and Elk Creek Springs, there is reasonable probability this application can be developed without noticeably impacting flow from springs.

Term limit

Although there is reasonable probability unappropriated water is available and the applicant can develop the proposed use without unlawful impairment of existing rights, the Water Management Board has not determined in a hearing that the requirements of SDCL 46-2A-20 to remove the requirement of the term limit are met. Therefore, this application is subject to a 20-year term limit.

Conclusions

1. Water Permit Application No. 1997-1 seeks to appropriate an additional 0.89 cfs from the well approved for Water Right No. 1928-1. Water Right No. 1928-1 appropriates 0.51 cfs from one well completed into the Madison aquifer located in the NW ¼ SW ¼ Section 5-T5N-R6E for rural water system use serving users in Meade and Lawrence Counties. If this application is approved, it and Water Right No. 1928-1 will be limited to an annual volume of 200 acre-feet of water with a combined maximum diversion rate of 1.4 cfs.
2. Based on hydrologic budgets and observation well analysis, there is reasonable probability unappropriated water is available.
3. There is reasonable probability this application can be developed without unlawful impairment of existing water rights/permits and domestic wells.
4. This application is subject to a 20-year term limit.



Kim Drennon, Natural Resources Engineer
DENR – Water Rights Program

References

1. **Fahrenbach, M. D., et al.** *South Dakota Stratigraphic Correlation Chart*. Vermillion, South Dakota : SD DENR Geological Survey Program, 2010. Oil and Gas Investigations 3.
2. **Allen, Johnette C., Iles, Derric L. and Petres, Anthony K.** *Analysis of groundwater and streamflow data; Western Dakotas region of South Dakota*. Omaha, Nebraska : U.S. Army Corps of Engineers, 1985. Contract DACW45-82-C-0151.
3. **Peterson, James A.** *Stratigraphy and sedimentary fascies of the Madison Limestone and associated rocks in parts of Montana, Nebraska, North Dakota, South Dakota, and Wyoming*. Alexandria, VA : U.S. Geological Survey, 1984. U.S. Geological Survey Professional Paper 1273-A.
4. **Carter, Janet M., Driscoll, Daniel G. and Hamade, Ghaith R.** *Estimated recharge to the Madison and Minnelusa aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98*. Rapid City, South Dakota : United States Geological Survey, 2001. Water-Resources Investigations Report 00-4278.
5. **Long, Andrew J. and Putnam, Larry D.** *Flow-system analysis of the Madison and Minnelusa aquifers in the Rapid City area, South Dakota - Conceptual model*. Rapid City, South Dakota : United States Geological Survey, 2002. Water-Resources Investigations Report 02-4185.
6. **SD Water Rights.** *Observation Well Database*. [Electronic database] Pierre, South Dakota, USA : SD DENR Water Rights Program, 2020.
7. **Kinslow, Dennis.** System Manager, Bear Butte Valley Water, Inc. *Personal communication*. 7 13, 2020.
8. **Carter, Janet M., et al.** *Hydrologic budgets for the Madison and Minnelusa aquifers, Black Hills of South Dakota and Wyoming, Water Years 1987-96*. Rapid City, South Dakota : United States Geological Survey, 2001. Water-Resources Investigations Report 01-4119.
9. **Rahn, Perry H. and Gries, John P.** *Large springs in the Black Hills, South Dakota and Wyoming*. Vermillion, South Dakota : SD DENR Geological Survey Program, 1973. Report of Investigations 107.
10. **Woodward-Clyde Consultants.** *Well-field hydrology technical report for the ETSI coal slurry pipeline project*. s.l. : United States Department of Interior Bureau of Land Management, 1981.
11. **SD Water Rights.** *Water Right/Permit Files*. [Electronic database] Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2020.
12. —. SD Department of Environment and Natural Resources . *Powertech (USA) Inc. Consolidated Contested Case*. [Online] SD DENR Water Rights Program, May 13, 2020. [Cited: May 13, 2020.] https://denr.sd.gov/powertech_wmb.aspx.
13. —. *Irrigation Questionnaire Summaries*. Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2019.
14. **Kilts, Whitney.** *Report to the Chief Engineer on Water Permit Application No. 2763-2*. Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2017.

15. **Drennon, Kimberly C.** *Report to the Chief Engineer on Future Use Permit Application No. 1995-1.* Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2020.
16. **Strobel, Michael L, et al.** *Distribution of hydrogeologic units in the Black Hills Area, South Dakota.* Rapid City, South Dakota : United States Geological Survey, 1999. Hydrologic Investigations Atlas 743.
17. **NOAA.** Climate at a Glance - Divisional Time Series for South Dakota Region 4. *NOAA National Centers for Environmental information.* [Online] May 1, 2020bh. [Cited: May 18, 2020.] <https://www.ncdc.noaa.gov/cag/divisional/time-series>.
18. **SD Water Rights.** *Well Completion Report Database.* Joe Foss Bldg., Pierre, South Dakota, USA : s.n., April 15, 2020.
19. —. *County Files.* Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2020.
20. **Driscoll, Daniel G., et al.** *Hydrology of the Black Hills Area, South Dakota.* Rapid City, South Dakota : United States Geological Survey, 2002. Water-Resources Investigations Report 02-4094.
21. **SD Water Rights.** *Finding of Facts, Conclusions of Law, and Final Decision on the Matter of Water Permit Application No. 2585-2.* Water Permit Application No. 2585-2, Pierre, South Dakota : SD Water Management Board, 1997.

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, July 23, 2020 11:22 AM
To: 'dennisk.bbwater@gmail.com'
Subject: Water Permit Application No. 1997-1
Attachments: Application No. 1997-1.pdf

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

Karen Schlaak

Water Rights Program
(605) 773-3352



RECEIVED

AUG 05 2020

WATER RIGHTS
PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA:

COUNTY OF LAWRENCE:

Letitia Lister of said County and State being first duly sworn, on her oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Letitia Lister, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and that I, Letitia Lister, the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

Notice of Application
No 1997-1

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive and consecutive weeks, the first publication being made on the 29th day of July, 2020 and the last publication on the _____ day of _____, that the full amount of fees charged for publishing same, to-wit: The sum of \$ 29.11, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

Subscribed and sworn to before me this 3rd day of Aug, 2020

Notary Public, Butte County, South Dakota

My commission expires: 3-21-2023

NOTICE OF APPLICATION NO. 1997-1 to Appropriate Water

Notice is given that Bear Butte Valley Water, Inc., c/o Bruce Weyrich, President, PO Box 351, Sturgis SD 57785 has filed an application for a water permit to appropriate an additional 0.89 cubic feet of water per second (cfs) from an existing well. Water Right No. 1928-1 authorizes 0.51 cfs from one well completed into the Madison Aquifer (3,623 feet deep) located in the NW 1/4 SW 1/4 Section 5-T5N-R6E for rural water system use serving users in Meade and Lawrence Counties. This application, if approved, and Water Right No. 1928-1 will authorize a total diversion rate of 1.40 cfs and up to a combined annual volume of 200 acre-feet of water. This site is located approximately 3 miles east of Sturgis SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1997-1 with a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) although evidence is not available to justify issuing this permit without a 20 year term limitation, 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.

The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://derr.sd.gov/public> - 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 10, 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 \$30.03.

#179
Jul 29

RECEIVED

AUG 03 2020

A circular notary seal for Tamara Ravellete, a Notary Public in South Dakota. The seal features the name "TAMARA RAVELLETE" at the top, "NOTARY" in the center, "SEAL" in large letters, "PUBLIC" below it, and "SOUTH DAKOTA" at the bottom. The entire seal is enclosed in a decorative border.

**NOTICE OF
APPLICATION
NO. 1997-1 to
Appropriate Water**

Notice is given that Bear Butte Valley Water, Inc., c/o Bruce Weyrich, President, PO Box 351, Sturgis SD 57785 has filed an application for a water permit to appropriate an additional 0.89 cubic feet of water per second (cfs) from an existing well. Water Right No. 1928-1 authorizes 0.51 cfs from one well completed into the Madison Aquifer (3,623 feet deep) located in the NW 1/4 SW 1/4 Section 5-T5N-R6E for rural water system use serving users in Meade and Lawrence Counties. This application, if approved, and Water Right No. 1928-1 will authorize a total diversion rate of 1.40 cfs and up to a combined annual volume of 200 acre-feet of water. This site is located approximately 3 miles east of Sturgis SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1997-1 with a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) although evidence is

not available to justify issuing this permit without a 20 year term limitation, 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.

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 10, 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 July 29, 2020 at the total approximate cost of \$27.44.

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, July 23, 2020 11:19 AM
To: Legals (legals@bhpioneer.com)
Subject: 1997-1, Bear Butte Valley Water Inc
Attachments: 1997-1public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on July 29, 2020.

Bear Butte Valley Water Inc., c/o Bruce Weyrich, PO Box 351, Sturgis SD 57785 (605 206-0703) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

Water Rights Program
(605) 773-3352



Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, July 23, 2020 11:17 AM
To: 'faithind@faithsd.com'
Subject: 1997-1, Bear Butte Valley Water Inc
Attachments: 1997-1public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on July 29, 2020.

Bear Butte Valley Water Inc., c/o Bruce Weyrich, PO Box 351, Sturgis SD 57785 (605 206-0703) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

Water Rights Program
(605) 773-3352



DENR
SOUTH DAKOTA



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

July 23, 2020

Bear Butte Valley Water Inc.
c/o Bruce Weyrich, President
PO Box 351
Sturgis SD 57785

Dear Mr. Weyrich:

Water Permit Application No. 1997-1 for use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Faith Independent printed at Faith SD (Ph # 605 967-2161) and the Black Hills Pioneer printed at Spearfish SD (Ph # 605 642-2761). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Karen Schlaak
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.

Instruction to Newspaper - Publish the Notice on July 29, 2020. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 1997-1 to Appropriate Water

Notice is given that Bear Butte Valley Water, Inc., c/o Bruce Weyrich, President, PO Box 351, Sturgis SD 57785 has filed an application for a water permit to appropriate an additional 0.89 cubic feet of water per second (cfs) from an existing well. Water Right No. 1928-1 authorizes 0.51 cfs from one well completed into the Madison Aquifer (3,623 feet deep) located in the NW 1/4 SW 1/4 Section 5-T5N-R6E for rural water system use serving users in Meade and Lawrence Counties. This application, if approved, and Water Right No. 1928-1 will authorize a total diversion rate of 1.40 cfs and up to a combined annual volume of 200 acre-feet of water. This site is located approximately 3 miles east of Sturgis SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1997-1 with a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) although evidence is not available to justify issuing this permit without a 20 year term limitation, 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.

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 10, 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 _



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

AUG 17 2020

Bear Butte Valley Water Inc
c/o Bruce Weyrich, President
PO Box 351
Sturgis SD 57785

Dear Mr. Weyrich:

Enclosed is Water Permit No. 1997-1 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