

WATER PERMIT NO. 2906-2

Name of Applicant: **Black Hills Electric Cooperative**

Address: **PO Box 792, Custer SD 57730** Phone: **605-673-4461**

Amount of Water Claimed: **30 AF** Total Acres: **N/A**

Source of Water Supply: **Groundwater**

Water to be used for: **Com** County: **Custer**

Type of Waste Disposal System:

Location: **Approx. 0.5 miles southwest of Hermosa**

PRIORITY Date Received: **03-11-26**

Application/License Fee: **\$300.00**

Corrected Application Received: **03-11-26**

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

Remarks:

Diversion Point: **NW 1/4 NE 1/4 Sec 31-T2S-R8E**

Land to be Irrigated: **N/A**

Depth of Well: **1,100**

Well Driller:

Remarks:

Type of Map: **aerial**

Reviewed and the Number Assigned on: **03-11-26**

By: **Rachel Rodriguez**

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 2906-2

Date of first receipt of application March 11, 2026.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2906-2 to Black Hills Electric Cooperative, PO Box 792, Custer SD 57730, 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. 2906-2 appropriates up to 30 acre-feet of water annually at a maximum pump rate of 0.067 cubic feet of water per second from one well to be completed into the Inyan Kara Aquifer (approximately 1,100 feet deep) located in the W 1/2 NE 1/4 Section 31-T2S-R8E for commercial use. The site is located approximately half a mile southwest of Hermosa SD.
2. The water appropriated shall be used for the purpose of commercial use 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. 2906-2 is June 22, 2026.
5. The date from which applicant may claim right is March 11, 2026.
6. One-fifth of the construction is to be completed on or before December 22, 2028.
7. All construction is to be completed on or before June 22, 2031.
8. Water is to be put to beneficial use on or before June 22, 2035.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals must be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Any future replacement or additional wells must meet the adequate well construction standards as defined in Administrative Rule of South Dakota (ARSD) 74:02:04:20. Any replacement or additional wells may not be constructed using the alternative construction requirements that are allowed for domestic use wells outlined in ARSD 74:02:04:36.
3. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara aquifer.
4. Water Permit No. 2906-2 authorizes a total annual diversion of up to 30 acre-feet of water.

WATER MANAGEMENT BOARD

By: 
Adam Mathiowetz, PE
Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

JUL 27 2026

date



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MAR 11 2026

PAID

MAR 11 2026

Ck# 89693

Rec't#

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2906-2</u> Hydrologic Unit <u>10120109</u> Basin <u>Cheyenne</u> Newspaper <u>Custer County Chronicle</u> <u>Rapid City Journal</u> (office use only)	OFFICE OF WATER
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Application for Permit to Appropriate Water in South Dakota

Check use(s) of water:

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

Type of Application: (check one)

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

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

- Name to Appear on Water Permit Black Hills Electric Cooperative
Mailing Address PO Box 792 Custer SD 57730
(Address) (City) (State) (Zip Code)
Phone 605-673-4461 Mobile _____ Email michellef@bhec.coop
- Amount of water claimed 0.067 *CFS or 30 **GPM and 30 ***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)
- Source of water supply Inyan Kara / Lakota
- Location of point of diversion NE 1/4 Section 31 T2 R8E (W 1/2 NE 1/4) County Custer
(example - 3 wells in SW 1/4 NE 1/4 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 - NW 1/4 section 12-T104N-R53W)
- County or counties where water will be used Custer
- Annual period during which water is to be used January 1 - December 31
- 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)

Black Hills Elec Cooperative proposed office, field technician warehouse/shop and storage yard.

I, Michelle Fisher, 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)

OFFICE OF
WATER**1. Well Information** (check one or both as applicable)☒ Drilling new well(s) ☐ Using existing well(s)a) If new wells, how many 1 Have test holes been drilled? ☐ Yes ☒ No Drilled by _____
(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) 1100 Depth to Top of Water Bearing Material 750 Depth to Water from Surface 350d) Distance to nearest domestic well on applicant's property NA Property owned by others 1,900 Ft.**2. Wastewater Disposal System Information**a) Type of System (i.e. septic tank, drain field) Septic drainfieldb) System Capacity (gallons) 1500 Year Constructed to be constructed in 2026

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)

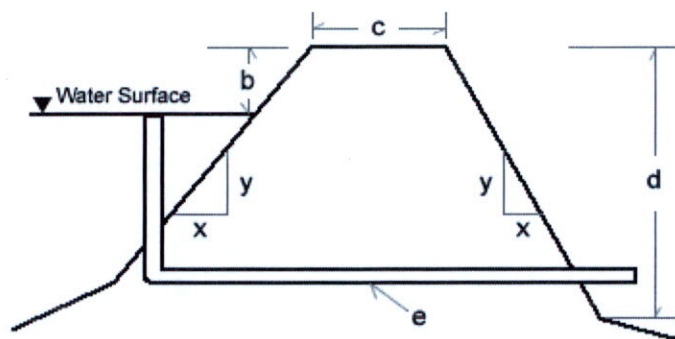
Upstream _____

Downstream _____

h) Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



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OFFICE OF
WATER

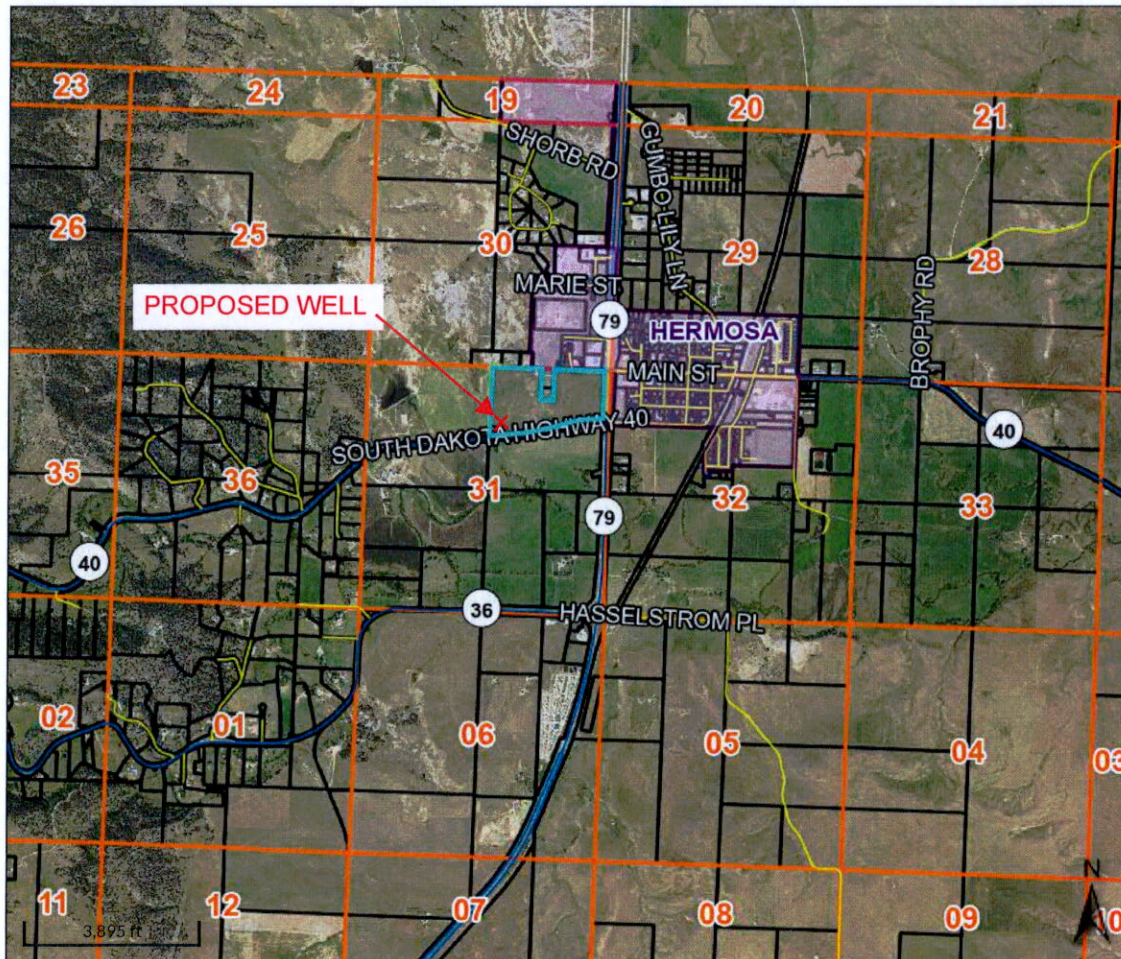


Overview



Legend

- Corporate Limits
- Highways
 - SD Hwy
 - US Hwy
 - Roads
- Parcels
- Sections



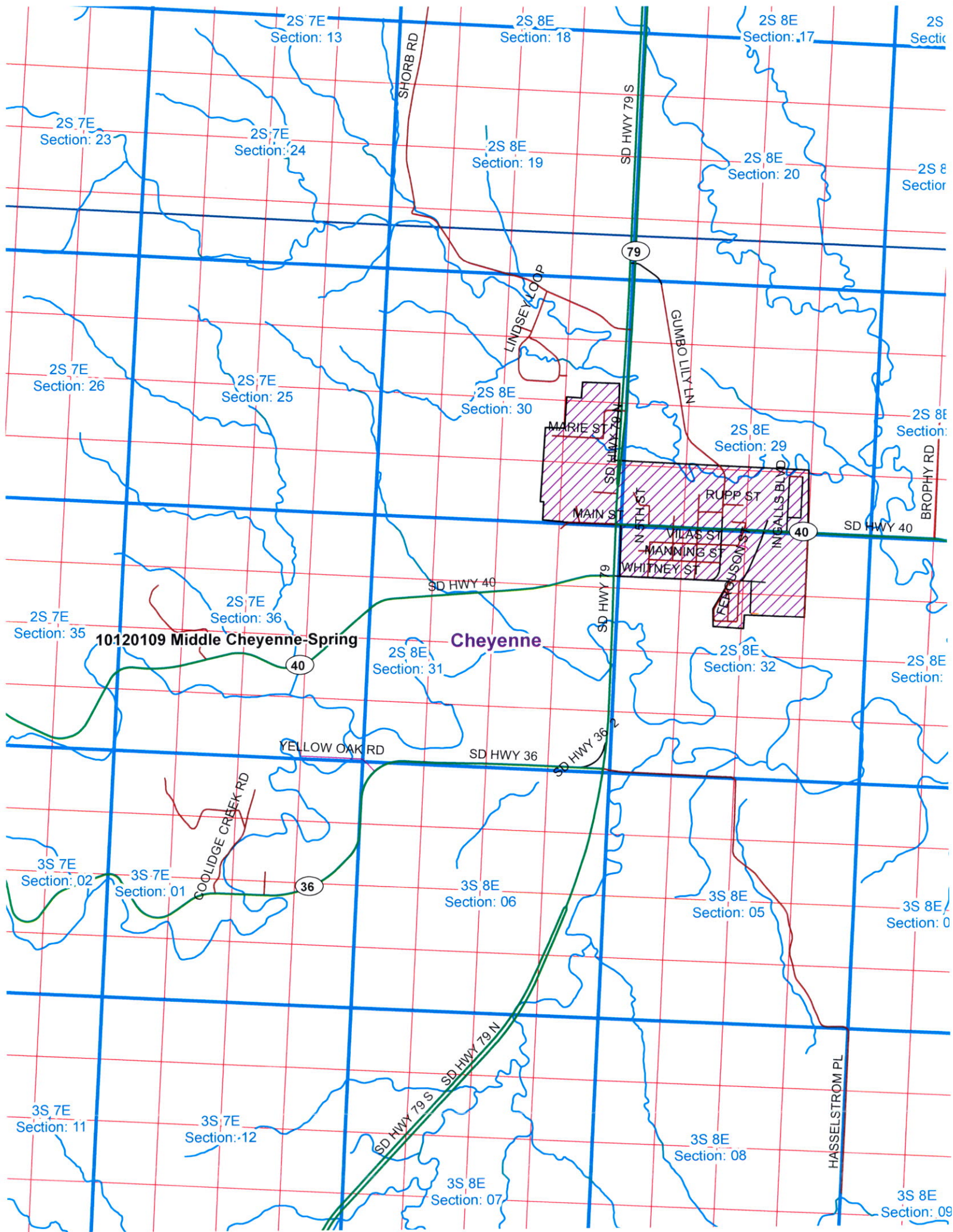
Parcel ID	015778	Alternate ID	n/a	Owner Address	BLACK HILLS ELECTRIC COOPERATIVE, INC
Sec/Twp/Rng	031/0002/008	Class	Agricultural		PO BOX 792
Property Address		Acreage	66.49		CUSTER, SD 57730-0792
District	16.1-7-1-0-0-0				
Brief Tax Description	BHEC TRACT IN NE4 SEC 31 T2 R8 66.49 AC				
	(Note: Not to be used on legal documents)				

Parcels are not adjusted to match aerial background. GIS information is for reference purposes only and is not a legal document. Data may contain errors.

Date created: 2/23/2026

Last Data Uploaded: 2/21/2026 3:17:10 AM

Developed by SCHNEIDER
GEOSPATIAL



10120109 Middle Cheyenne-Spring

Cheyenne

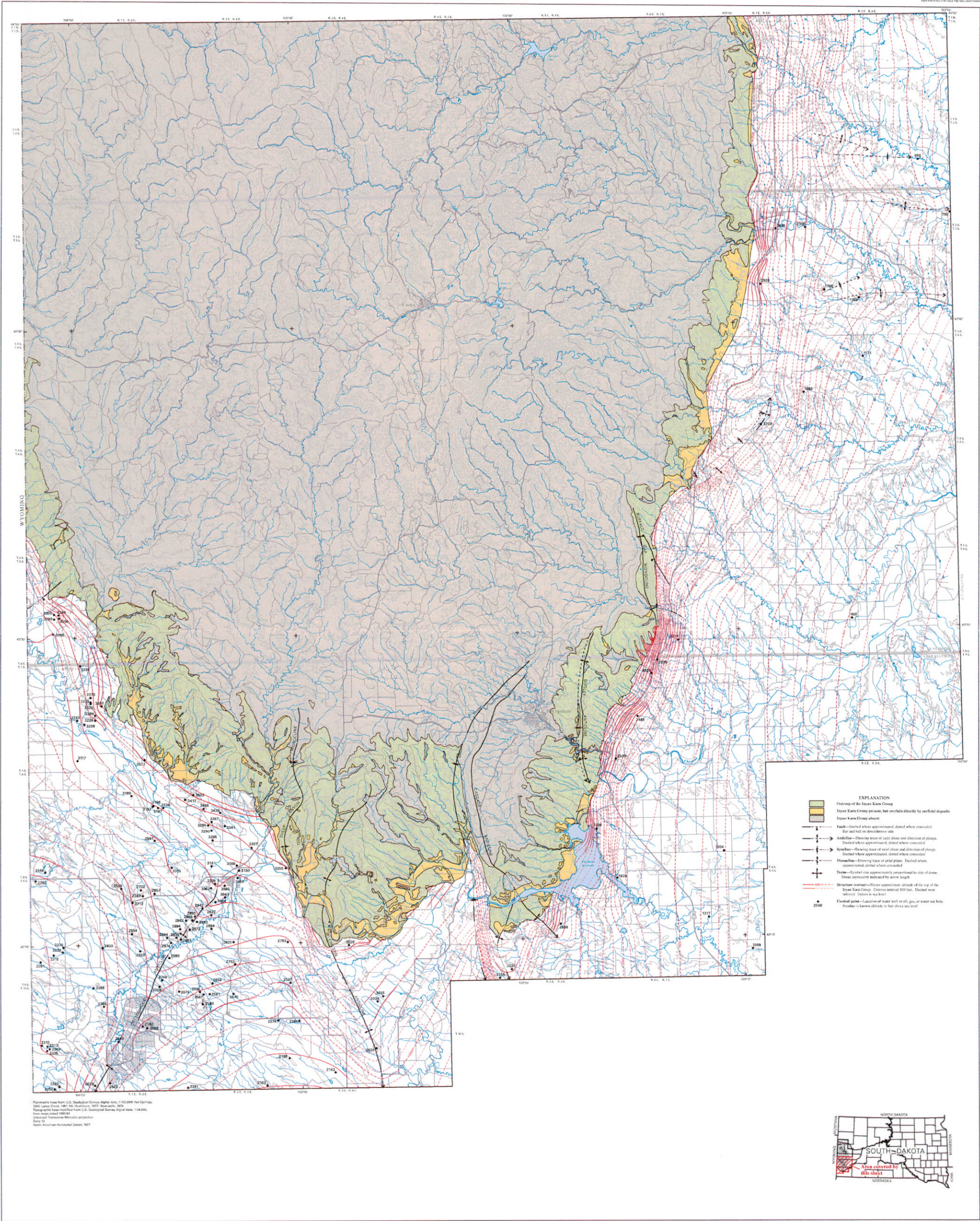
YELLOW OAK RD

SD HWY 36

SD HWY 36 2

SD HWY 79 S SD HWY 79 N

HASSELSTROM PL



Altitude of the Top of the Inyan Kara Group in the Black Hills Area, South Dakota
By
Janet M. Carter and Jack A. Redden
1999

RECEIPT

WATER RIGHTS PROGRAM

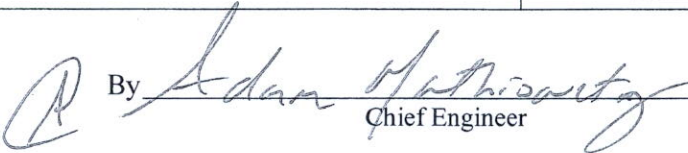
South Dakota Department of Agriculture and Natural Resources

Date March 11, 2026

RECEIVED OF Black Hills Electric Cooperative PO Box 792 Custer SD 57730

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	\$100.00
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. _____	\$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	\$300.00

By  Chief Engineer



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

**RECOMMENDATION OF ACTING CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2906-2, Black Hills Electric Cooperative**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Acting Chief Engineer, Water Rights Program, Department of Agriculture and Natural Resources concerning Water Permit Application No. 2906-2, Black Hills Electric Cooperative, PO Box 792, Custer SD 57730.

The Acting Chief Engineer is recommending APPROVAL of Application No. 2906-2 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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board with the following qualifications:

1. The well approved under this Permit is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals must be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Any future replacement or additional wells must meet the adequate well construction standards as defined in Administrative Rule of South Dakota (ARSD) 74:02:04:20. Any replacement or additional wells may not be constructed using the alternative construction requirements that are allowed for domestic use wells outlined in ARSD 74:02:04:36.
3. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara aquifer.
4. Water Permit No. 2906-2 authorizes a total annual diversion of up to 30 acre-feet of water.

See report on application for additional information.

Adam Mathiowetz, PE
Acting Chief Engineer
May 26, 2026

Report to the Chief Engineer
On Water Permit Application No. 2906-2
Black Hills Electric Co.

May 11th, 2026

Water Permit Application No. 2906-2 proposes to appropriate up to 30 acre-feet of water annually at a maximum diversion rate of 0.067 cubic feet of water per second (cfs) from one well to be completed into the Inyan Kara aquifer (approximately 1,100 feet deep) located in the W ½ NE ¼ Section 31-T2S-R8E for commercial use. This site is located in Custer County, approximately half a mile southwest of Hermosa, SD.

AQUIFER: Inyan Kara (INKR)

HYDROGEOLOGY:

The Inyan Kara aquifer is the saturated and permeable materials that make up the Lower Cretaceous-aged Inyan Kara Group. The Inyan Kara aquifer is a bedrock aquifer that underlies most of the northern great plains in Montana, North Dakota, South Dakota, Wyoming, and extends up into Canada (Downey, 1986). The Inyan Kara Group, in South Dakota, is comprised of Lower Cretaceous-aged Fall River and Lakota Formations (Downey, 1986). The Lakota Formation comprises the lower two-thirds while the Fall River Formation comprises the upper one-third of the Inyan Kara Group (Gott & others, 1974). The Water Rights Program and Water Management Board consider the Inyan Kara Group (Fall River and Lakota Formations) as one aquifer for appropriation. The Inyan Kara aquifer underlies approximately 23,000,000 acres of South Dakota west of the Missouri River and 6,400,00 acres east of the Missouri River (Allen & others, 1985; Hedges & others, 1982).

In South Dakota, the Inyan Kara aquifer is primarily under confined conditions, except for the outcrops in the Black Hills where the aquifer is found to be unconfined (Driscoll and Carter, 2001; Water Rights, 2026b and 2026d). A majority of the Inyan Kara aquifer is overlain by the impermeable Skull Creek Shale, and in areas without the Skull Creek Shale the Inyan Kara aquifer discharges to the overlying Dakota aquifer (Schoon, 1971). The underlying Morrison Shale confines the Inyan Kara aquifer from other aquifers below it (Schoon, 1971), although due to the large extent of the area where stratigraphically lower, higher pressure, aquifers underly the Inyan Kara aquifer, water can flow through the Morrison Shale into the Inyan Kara aquifer (Bredehoeft and others, 1983). Generally, the groundwater flow direction of the Inyan Kara aquifer is outwards from the Black Hills outcrop and eastward across South Dakota (Strobel & others, 2000; Martin & others, 2004; Water Rights, 2026b).

A well completion report was not submitted with this application, so the nearest well completion report to this application will be used instead. The nearest well completion report is located half a mile east from this application proposed well site and was completed on June 28th, 1994 (Water

Rights, 2026d). The water well completion report shows the top of aquifer material 710 feet below ground surface. The static water level at the time of well completion was 120 feet of water above ground surface (Water Rights, 2026b). Based on the top of aquifer material, the static water level, and total well depth (1,100 ft), the aquifer is confined with a saturated aquifer thickness of at least 220 feet (Water Rights, 2026b). The well completion report indicates the aquifer material is confined by a layer of shale above the aquifer and is similar to other nearby test hole reports and well completion reports for Inyan Kara aquifer wells (Water Rights, 2026d).

South Dakota Codified Law (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9,

“A permit to appropriate water may be issued only if there is a reasonable probability that unappropriated water is available for the applicant’s proposed use, the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, the proposed use is a beneficial use, and the permit is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board as defined by SDCL 46-2-9 and 46-2-11.”

This report will address the availability of unappropriated water and the potential for unlawful impairment of existing domestic uses and water rights within the Inyan Kara aquifer.

WATER AVAILABILITY:

Water Permit Application No. 2906-2 proposes to appropriate water from the Inyan Kara aquifer. The probability of unappropriated water being available from the aquifer can be evaluated by considering 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 application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.”

The Inyan Kara aquifer is older and stratigraphically lower than the Greenhorn Formation (Fahrenbach & others, 2010). However, the applicant’s proposed use is not for use in a water distribution system as defined by SDCL 46-1-6(17). Therefore, the average annual recharge and average annual withdrawal rates to and from the Inyan Kara aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

The Inyan Kara aquifer in South Dakota primarily receives recharge from precipitation on the outcrops of the Black Hills. The outcrop area of the Inyan Kara aquifer in the Black Hills, South Dakota is estimated to be 267,806 acres with a total estimated precipitation-only recharge of 14,406 acre-feet per year (Medler & others, 2025). This estimate does not account for leakage from underlying aquifers in areas that were not included in the study area (Medler & others, 2025).

The Inyan Kara aquifer also receives recharge from inflow of groundwater from adjacent aquifers when the hydraulic head of Inyan Kara aquifer is lower than adjacent aquifers (Lobmeyer, 1985). Bredehoeft & others (1983) attempted to model flows between the different aquifers. The model estimated that approximately 22.7 cfs or 16,000 acre-feet per year flows from the Madison group to the Inyan Kara aquifer. It should be noted the Madison Group as described in Bredehoeft & others (1983) describes a portion of the Madison Group primarily in eastern South Dakota where it, the Inyan Kara Group, and the Dakota-Newcastle sandstone, can blend together at the eastern extents of the Madison and Inyan Kara groups. In the Black Hills area, the Madison Group is geologically separated from the Dakota-Newcastle Sandstone and Inyan Kara Group described in Bredehoeft & others (1983) by several aquifers and impermeable shales, some of which were lumped into the Madison Group description in Bredehoeft & others (1983) (Fahrenbach & others, 2010). While the Bredehoeft & others (1983) models rely on estimates of recharge to underlying aquifers which are lower than those from newer studies (Medler & others, 2025), this is currently the best reasonably available estimate of recharge to the Inyan Kara aquifer from underlying aquifers. Collectively, the estimated average annual recharge to the Inyan Kara aquifer in South Dakota is 30,406 acre-feet per year (Bredehoeft & others, 1983; Medler & others, 2025).

Discharge

Discharge from the Inyan Kara aquifer is from leakage to adjacent aquifers or hydrologically connected surface water features, regional groundwater outflow east of the Black Hills, evapotranspiration where the aquifer is at or near land surface, uncontrolled flowing wells, and well withdrawals (Driscoll and Carter, 2001; Water Rights, 2026c). It is not currently known how much water is being discharged from uncontrolled wells. The impermeable Skull Creek Shale separates the Inyan Kara aquifer from the overlying Dakota formation except in eastern South Dakota where the shale is not present, and water in the Inyan Kara aquifer can flow into the Dakota aquifer (Fahrenbach & others, 2010; Bredehoeft & others, 1983).

There are currently 215 active water rights/permits appropriating water from the Inyan Kara aquifer, one future use permit reserving water, and two other water permit application (Nos. 2904-2 & 2906-2) to appropriate water from the Inyan Kara aquifer (Water Rights, 2026c). Additionally, Water Permit Application No. 2686-2 for Powertech (USA), Inc., is being held in

abeyance pending action on federal permits and proposes to appropriate 274.2 acre-feet per year. Future Use Permit No. 1780-2 for the Town of New Underwood reserves 142 acre-feet per year. For the hydrologic budget, it will be assumed that water reserved by the future use permit and the proposed appropriation by Application No. 2686-2 will be fully developed. This application proposes to use up to 30 acre-feet of water. Water Permit Application Nos. 2904-2 & 2050-1 propose to appropriate a combined total of 104.6 acre-feet of water. Altogether, this and the other two water permit applications, if approved, will withdrawal approximately 135 acre-feet of water from the Inyan Kara aquifer (Water Rights, 2026c).

Of the 215 active water rights/permits, 199 are primarily for a non-irrigation use. Of the 199 water rights/permits that are for a non-irrigation use, 15 are currently used for large, concentrated animal feeding operations (CAFOs). This information was found by searching the SD DANR Livestock Services permitting database (2026). The annual use for these permits was estimated by multiplying the number of permitted animals by the average daily use for each type of animal permitted (Table 1) (Meehan & others, 2021; Water Rights, 2026c). Water Permit No. 8607-3 is an active feedlot but is not included on Table 1 as the permit holder is required to report to the Chief Engineer and the estimated use will be quantified with those water rights/permits instead. The total estimated annual use for large CAFO water rights/permits using the above method is 1,432 acre-feet per year.

Of the 199 active water rights/permits that are for a non-irrigation use, 12 are currently known by DANR to purchase water from a rural water system, are supplied by another municipality, or maintain their wells on standby or backup use, in accordance with ARSD 74:02:01:37.02 (Friedeman and Hullinger, 2025; Water Rights, 2026c). Past practice of the Water Rights Program has been to assume negligible use for these water rights/permits. Table 2 below lists the 12 water rights/permits that will be assumed to use zero acre-feet of water per year. Water Right No. 6735-3 for the City of Eureka purchases 74% of their water from WEB (Drinking Water Program, 2026). The remaining 26% is pumped locally and will contribute to the hydrologic budget with the other non-irrigation water rights/permits in Table 5.

Table 1. Estimated annual water use for active Inyan Kara CAFO water rights/permits (CAFO Permitting Database, 2026; Water Rights, 2026c).

Permit No.	Status	Name	County	Authorized Diversion Rate (cfs)	Annual Limit (ac-ft/yr)	Estimated Livestock Needs (ac-ft/yr)	Estimated Use (ac-ft/yr)
2178-2	LC	Fall River Feed Yard LLC	Fall River	0.62	449	280	280
4965-3	LC	Dakota Feeding Company LLC	Sully	0.33	239	168	168
5879-3	LC	Danbred Production Partnership	Sully	0.71	515	101	101
5890-3	LC	Evergreen Colony	Faulk	0.14	101	189	101
6011-3	LC	Plainview Colony Httm	Edmunds	0.22	159	135	135
6091-3	PE	Brentwood Colony	Faulk	0.10	72	58	58
6128-3	LC	Deerfield Httm Brethren	Edmunds	0.27	196	70	70
6257-3	PE	Thunderbird Colony	Faulk	0.20	145	149	145
6376-3	LC	LDL Cattle Company	Edmunds	0.22	159	112	112
6377-3	LC	LDL Cattle Company	Edmunds	0.27	196		
6619-3	PE	PJ Werdel & Sons	Hand	0.33	239	112	112
6851-3	LC	Todd Cowan	Hyde	0.15	109	46	46
7034-3	LC	Vogel & Sautner Farms	Pennington	0.12	89	45	45
7098-3	LC	Mike & Jessie Fuller	Sully	0.04	29	43	29
7209-3	LC	Paul Oberlitner	Pennington	0.04	29	62	29
LC: Licensed Water Right; PE: Water Permit				Total (acre-feet/year):		2,726	1,569
							1,432

Table 2. Non-irrigation water rights/permits currently known to be served by another system or maintain wells for standby/backup and are assumed to have negligible use (Drinking Water Program, 2026; Water Rights, 2026c).

Permit No.	Status	Name	Use Type	Authorized Diversion Rate (cfs)	Served by/ Current Use:
1360-2	LC	Aladdin Investments Inc	SHD	0.15	Supplied by Rapid City
2224-3	LC	Sunshine Acres Water System	SHD	0.22	Mid Dakota RWS
2279-3	LC	Camelot Land	SHD	0.22	Supplied by City of Pierre
2442-2	LC	Rainbow Water Co Inc	SHD	0.09	Supplied by Rapid City
473-1	LC	Town of Fruitdale	MUN	1	Butte-Meade RWS
595-3	LC	City of Onida	MUN	1.11	Mid Dakota RWS
1198-3	LC	Town of Mound City	MUN	0.17	WEB RWS
1647-2	LC	Town of Quinn	MUN	0.2	West River/Lyman Jones RWS
1712-3	LC	City of Ipswich	MUN	0.19	WEB RWS
2263-2	LC	Town of Belvidere	MUN	0.17	West River/Lyman Jones RWS
1195-1	LC	American Colloid Company	IND	0.022	Backup water supply
1338-1	LC	Black Hills Petrified Forest	COM	0.03	Maintained on standby
LC: Licensed Water Right, SHD: Suburban Housing Development, MUN: Municipal; IND: Industrial; COM: Commercial					

The DANR Drinking Water Program requires public water systems to report their annual average production rate. The reported average production in gallons per day (found on their drinking water annual report) can be converted to acre-feet per year for a typical annual use estimate. This data is only being used for the water rights/permits that are not required to report annual use to the Chief Engineer and, if the Inyan Kara aquifer is their only source of water. Of the 199 active water rights/permits that are for a non-irrigation use, 13 water rights meet the above criteria to use this data for the budget. Table 3 lists those water rights that had their use quantified with data from the Drinking Water Program annual report. The total estimated use from these 13 water rights/permits is approximately 262 acre-feet per year.

Table 3. Typical use for public water systems that had their average annual use quantified using the DANR Drinking Water Program production rate data (Drinking Water Program, 2026; Water Rights, 2026c).

Permit No.	Name	Status	Use Type	Authorized Diversion Rate (cfs)	Priority Date	Estimated Use (acre-feet/year)
1793-1	Autumn Meadows Sanitary District	LC	SHD	0.17	05/13/2003	5
716-1	City of Newell	LC	MUN	0.44	09/27/1963	50
731-1	City of Newell	LC	MUN	0.44	06/10/1964	
1597-1	Crooked Oaks Canyon HOA	LC	SHD	0.10	03/22/1994	5
2448-2	Heartland Country Ranchettes	LC	SHD	0.089	10/04/2000	7
1861-1	Horseshoe Acres HOA	LC	SHD	0.17	04/20/2006	16
1278-2	Lakeside Water Users District	LC	RWS	0.50	07/21/1975	68
1656-1	Lofty Pines HOA	LC	SHD	0.085	01/02/1998	5
2268-2	Prairie Acres LLC	LC	SHD	0.22	03/09/1993	22
794-2	Town of Buffalo Gap	LC	MUN	0.19	03/11/1963	13
660-2	Town of New Underwood	LC	MUN	0.45	03/03/1961	55
1947-2	Town of New Underwood	LC	MUN	0.41	06/03/1981	
366-1	Town of Nisland	LC	MUN	0.15	01/01/1939	17
LC: Licensed Water Right, SHD: Suburban Housing Development, MUN: Municipal; RWS: Rural Water System					TOTAL:	262

There are 45 non-irrigation water rights/permits that are required to report their annual usage from the Inyan Kara aquifer to the DANR-Water Rights Program (Water Rights, 2026c and 2026f). Of the 45 water rights/permits, 24 have withdrawn a consistent volume from the Inyan Kara aquifer each year. As such, the average annual withdrawal rate estimated for these water rights/permits was the reported volume of water withdrawn by these users averaged over the respective period of reported record for each water right/permit (Water Rights, 2026c and 2026f) (Table 3). The remaining 21 non-irrigation water rights/permits required to report their annual usage have had less consistent withdrawals over their respective period of record or are still undergoing development of their permit (Water Rights, 2026c and 2026f). The average annual withdrawal rate estimated for these water rights/permits was assumed to be their entire respective annual volume limitation. Overall, the average annual withdrawal rate for the Inyan Kara non-irrigation water rights/permits that are required to report their annual volume withdrawn (to the Water Rights Program) is approximately 3,870 acre-feet per year (Table 3).

Table 4. Annual estimated withdrawals from water rights/permits required to report to the Chief Engineer (Water Rights 2026c and 2026f).

Permit No.	Name	Status	Use Type	Authorized Diversion Rate (cfs)	Priority Date	Annual Volume (acre-feet/year)	Estimated Use (acre-feet/year)
1826-1	Golden Valley Water Company LLC	LC	SHD	0.267	09/01/2004	N/A	20
1837-1	Guy Mann (Prairie Haven)	LC	SHD	0.22	02/28/2005	N/A	4
1846-1	Dennis or Anna Mae Beckham	LC	SHD	0.1	05/26/2005	N/A	5
1857-1	Shade Valley Inc	LC	COM	0.33	03/03/2006	N/A	1
1874-1	Viewfield Rural Water Assoc.	LC	RWS	0.212	01/03/2007	N/A	16
1898-1		LC	RWS	0.394	11/14/2007	N/A	33
1903-1	Castle Rock Group	LC	DOM	0.11	05/19/2009	N/A	16
1906-1	City of Sturgis	LC	MUN	0.222	08/21/2009	N/A	3
1958-1		LC	MUN	0.088	04/11/2016	8.1	
1920-1	Elk Valley Ranchettes Homeowners Assoc.	LC	SHD	0.1	01/24/2011	N/A	7
1968-1	Venekamps LLC	PE	SHD	0.11	04/27/2017	29	29
1983-1	Continental Resources	PE	IND	0.5	07/10/2018	360	360
1989-1	Luff Exploration Company	PE	IND	0.1	04/09/2019	58.8	59
2165-2	Tightline Lake Estates Homeowners Assoc. Inc.	LC	COM, SHD, REC, DOM	0.07	02/19/1991	N/A	9
2285A-2	West River - Lyman Jones	LC	RWS	0.56	05/17/1993	N/A	128
2464-2		LC	RWS	0.76	07/26/2011	360	132
2465-2		LC	RWS	1	07/26/2011	360	173
2797-2		PE	RWS	1	04/01/2019	455	455
2538-2	JKRK Properties LLC - Timberwood Park	PE	SHD	0.244	08/30/2004	N/A	16
2543-2	Southern Black Hills Water System	LC	SHD	0.19	09/30/2004	N/A	17
2752-2		PE	RWS	0.33	04/25/2016	170	170
2752A-2		PE	RWS	0	04/25/2016	0	
2754-2	Steve Simunek	LC	COM	0.1	05/31/2016	N/A	16
2550-2	Town of Hermosa	LC	MUN	0.22	01/25/2005	162	52
2596-2	City of Wall	LC	MUN	0.6	07/24/2006	261	148
2601-2	Grandview Land LLC	LC	SHD	0.33	09/01/2006	206	2
2622-2	Owanka Rural Water Assoc.	LC	RWS	0.39	10/09/2007	N/A	23
2635-2	Fall River Water Users District	LC	SHD	0.1	07/17/2008	N/A	12
2819-2		PE	RWS	0.09	06/01/2021	24.6	25
2778-2	Western Construction Inc	PE	COM	0.17	11/13/2017	31	31
2832-2	Reel Simple LLC	PE	WDS	0.044	11/08/2021	10	10
8197-3	Aberdeen Farm LLC	PE	COM	0.16	01/29/2016	72.1	72

Permit No.	Name	Status	Use Type	Authorized Diversion Rate (cfs)	Priority Date	Annual Volume (acre-feet/year)	Estimated Use (acre-feet/year)
8197A-3	Mina North LLC	PE	WDS, RWS, COM, GEO	0	01/29/2016	0	0
8299-3	Aberdeen Energy LLC	PE	IND	1.33	09/28/2018	968	968
8420-3	Vogel Farms PTR	PE	GEO	0.12	01/28/2020	88.7	89
8607-3	Spring Creek Hutterian Brethren Inc	PE	COM, DOM	0.22	02/15/2022	100	100
1996-1	Dylan Gingras	PE	SHD	0.133	04/14/2020	48	48
1999-1	Rafter Properties LLC	PE	WDS	0.17	07/23/2020	74	74
2841-2	Hwy 79 LLC	PE	COM, WDS	0.89	02/18/2022	217.9	218
1855-1	Wink Cattle Co	LC	COM, DOM	0.087	01/26/2006	N/A	20
1975-1		PE	COM, DOM	0.069	02/20/2018	N/A	
1975A-1		PE	COM, DOM	0	12/03/2018	N/A	
2830-2	Weinreis Brothers	PE	COM	0.33	10/04/2021	160	160
8635-3	Big Watt Digital SD LLC	PE	COM	0.89	05/09/2022	76.7	77
8972-3	Cheryl E & Erik L Nelson	PE	REC, FWP	0.1	07/22/2025	72.4	72
LC: Licensed Water Right; PE: Water Permit; RWS: Rural Water System; SHD: Suburban Housing Development; DOM: Domestic; MUN: Municipal; COM: Commercial; IND: Industrial; GEO: Geothermal; WDS: Water Distribution System						TOTAL:	3,870

The remaining 114 non-irrigation water rights/permits are not required to report to the Chief Engineer and do not meet the criteria to use production data reported to the Drinking Water Program. These water rights/permits are estimated for average annual use in one of two ways: water rights/permits limited by an annual volume are assumed to pump the entire volume, or water rights limited only by a diversion rate have historically been assumed to pump 60% of the time throughout the year at that rate. These are standard methods used by the Water Rights Program to estimate annual use by non-irrigation water rights/permits that do not have reported data (Water Rights, 2026c). The total estimated annual use for these remaining 105 non-irrigation water rights/permits is approximately 7,593 acre-feet per year.

Table 5. Summary of the Inyan Kara aquifer non-irrigation water rights/permits (not supplied by RWS, required to report, or operating a CAFO) with estimated annual use determined by their respective diversion rate or annual volume (Water Rights, 2026c)

Use Type	No. of Water Rights/Permits	Appropriation for Water Rights/Permits limited by Volume (acre-feet/year)	Appropriation for Water Rights/Permits limited by Diversion Rate (cfs)	Total Estimated Use (acre-feet/year)
RWS	13	N/A	2.657	1,154
SHD	20	N/A	3.145	1,366
REC	2	N/A	0.203	88
COM	34	121	3.29	1,550
DOM	13	N/A	1.43	621
FWP	6	48	0.40	222
GEO	2	N/A	0.24	104
INS	1	N/A	0.10	43
IND	7	N/A	0.846	368
MUN	15	N/A	4.71	2,046
WDS	1	30	N/A	30
TOTAL:	114	199	17	7,593
RWS: Rural Water System, SHD: Suburban Housing Development, REC: Recreation, COM: Commercial, DOM: Domestic, FWP: Fish & Wildlife Propagation, GEO: Geothermal, INS: Institutional, IND: Industrial, MUN: Municipal; WDS: Water Distribution System				

There are 16 water rights/permits currently authorized to appropriate water from the Inyan Kara aquifer for irrigation use (Water Rights, 2026c). Generally, irrigation water rights/permits are required to report their annual water usage. The average annual withdrawal rate for irrigation appropriations for the Inyan Kara aquifer (that have reported) over the period of record (1982-2024) is approximately 81.7 acre-feet per year (Table 6) (Water Rights, 2026a). To reflect the current development of irrigation water rights/permits more accurately, the estimated average annual withdrawal rate for the irrigation appropriations from 2016 to 2025 is approximately 110 acre-feet per year (Table 6) (Water Rights, 2026a). Currently, 11 out of the 16 irrigation water rights/permits are required to report their annual water usage. Table 6 lists ten water rights/permits as reporting as Water Permit No. 8334-3 is still within their respective construction period and has not reported any withdrawals from the aquifer at this time (Water Rights, 2026a and 2026c). The remaining five irrigation water rights/permits and Water Permit No. 8334-3 that are not required to report, are still within their construction period, or have not reported any withdrawals from the aquifer at this time are assumed to apply twelve inches of water (compared to maximum allowable volume of two acre-feet per year) over the 529 acres permitted/licensed, which results in a withdrawal rate of approximately 529 acre-feet per year (Water Rights, 2026c). Generally, irrigators in South Dakota apply less than one foot of water per acre per year. However, to account for the fluctuation in wet and dry cycles from year to year, the one foot of water per acre per year application rate will be used to somewhat overestimate the annual withdrawal rate for these irrigation water rights/permits. The collective estimated average annual withdrawal rate for the irrigation appropriations from 2016 to 2025 (110 acre-feet/year), plus the estimated average annual withdrawal rate for the irrigation water

permits still within their construction period (529 acre-feet/year), is approximately 639 acre-feet/year (Table 6) (Water Rights, 2026a and 2026c).

Table 6. Reported historic irrigation use from the Inyan Kara aquifer (Water Rights, 2026a).

Year	No. of Permits	Reported Use (acre-feet)	Year	No. of Permits	Reported Use (acre-feet)
1982	5	3	2006	8	136
1983	7	33	2007	8	142
1984	8	5	2008	9	131
1985	8	245	2009	9	99
1986	7	4	2010	9	113
1987	6	38	2011	9	130
1988	6	54	2012	9	189
1989	8	19	2013	9	146
1990	8	34	2014	9	112
1991	9	25	2015	7	106
1992	9	26	2016	7	178
1993	9	36	2017	8	184
1994	9	31	2018	9	100
1995	10	37	2019	10	71
1996	8	20	2020	11	95
1997	8	6	2021	11	114
1998	8	21	2022	10	97
1999	6	14	2023	10	97
2000	6	25	2024	10	92
2001	6	53	2025	11	74
2002	7	88	Max.	11	245
2003	6	112	Min.	5	3
2004	7	143	Average (1979-2025)	8	82
2005	7	133	Average (2016-2025)	10	110

There are domestic wells completed into the Inyan Kara aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2026d). Due to their relatively low diversion rates, withdrawals from domestic wells are not considered to be a significant portion of the hydrologic budget. Additionally, with the development of rural water systems in some areas where the Inyan Kara aquifer is available; it is likely some domestic users may have transitioned to rural water. Therefore, the quantity of water withdrawn by domestic wells is estimated to be negligible to the hydrologic budget for the Inyan Kara aquifer.

There is likely a number of wells completed into the Inyan Kara aquifer that do not have a well completion report on file with the DANR-Water Rights Program. The current status of many of these wells is unknown and could range from controlled and being put to beneficial use to uncontrolled with some beneficial use. There are also a number of uncontrolled flowing Inyan Kara aquifer wells that flow without deliberate beneficial use. The volume of water being discharged through uncontrolled flowing wells from the Inyan Kara aquifer has not, and likely cannot, be accurately quantified due to the location of all such wells not being known. The Water

Management Board has previously determined, for the Dakota aquifer, water being discharged through uncontrolled flowing wells is not a beneficial use and does not constitute appropriation pursuant to SDCL 46-6-3.1 (Water Rights, 1987). Since discharge from uncontrolled flowing wells is likely to continue until artesian head pressure in the aquifer declines to being at or below ground surface, continuing to allow beneficial pumping to occur reduces the amount of water being discharged through uncontrolled flowing wells. Therefore, the Water Management Board has allowed continued development from the Dakota aquifer. This conclusion likely applies to the Inyan Kara aquifer as well.

Hydrologic Budget Summary

The estimated average annual recharge to the Inyan Kara aquifer is approximately 30,406 acre-feet per year (Medler & others, 2025; Bredehoeft & others, 1983). Table 7 below is a summary of estimated withdrawals from active Inyan Kara water rights/permits. The estimated average annual withdrawal from the Inyan Kara aquifer is approximately 14,347 acre-feet. The Inyan Kara aquifer is a major bedrock aquifer in South Dakota and is estimated to hold 84.7 million acre-feet in storage (Carter & others, 2002). Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the Inyan Kara aquifer for the proposed appropriation.

Table 7. Summary of annual withdrawal estimates for the Inyan Kara aquifer (Water Rights, 2026a, 2026c, 2026d; CAFO Permitting Database, 2025; Drinking Water Program, 2026; Friedeman and Hullinger, 2025).

Type of Withdrawal	No. of Permits	Estimated Use (acre-feet/year)
Non-Irrigation, CAFO	15	1,432
Non-Irrigation, served by another system or on standby	12	0
Non-Irrigation, Drinking Water Program Data	13	262
Non-Irrigation, Report to the Chief Engineer	45	3,870
Non-Irrigation, the Remaining Water Rights/Permits	114	7,593
Irrigation, (including non-reporting permits)	16	639
Active Total Withdrawal:	215	13,796
Application No. 2686-2	1	274
Future Use Permit No. 1780-2	1	142
Pending Applications (2904-2, 2050-1, & 2906-2)	3	135
Total Withdrawal:	219	14,347

OBSERVATION WELL DATA:

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires that the Water Management Board shall rely upon the record of observation well measurements in addition to other data to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer.

The DANR-Water Rights Program monitors nine observation wells completed into the Inyan Kara aquifer. The observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The closest observation wells to the diversion point are CU-83B

(approximately 1.6 miles west) and CU-83C (approximately 3.8 miles south) (Water Rights, 2026b). The water level elevation for these observation wells are displayed in Figure 1 (Water Rights, 2026b). There is one other observation well located more than 170 miles northeast of the diversion point in Eastern South Dakota. The water levels of the eight observation wells located in the Black Hills have a stable or rising trend in their periods of records.

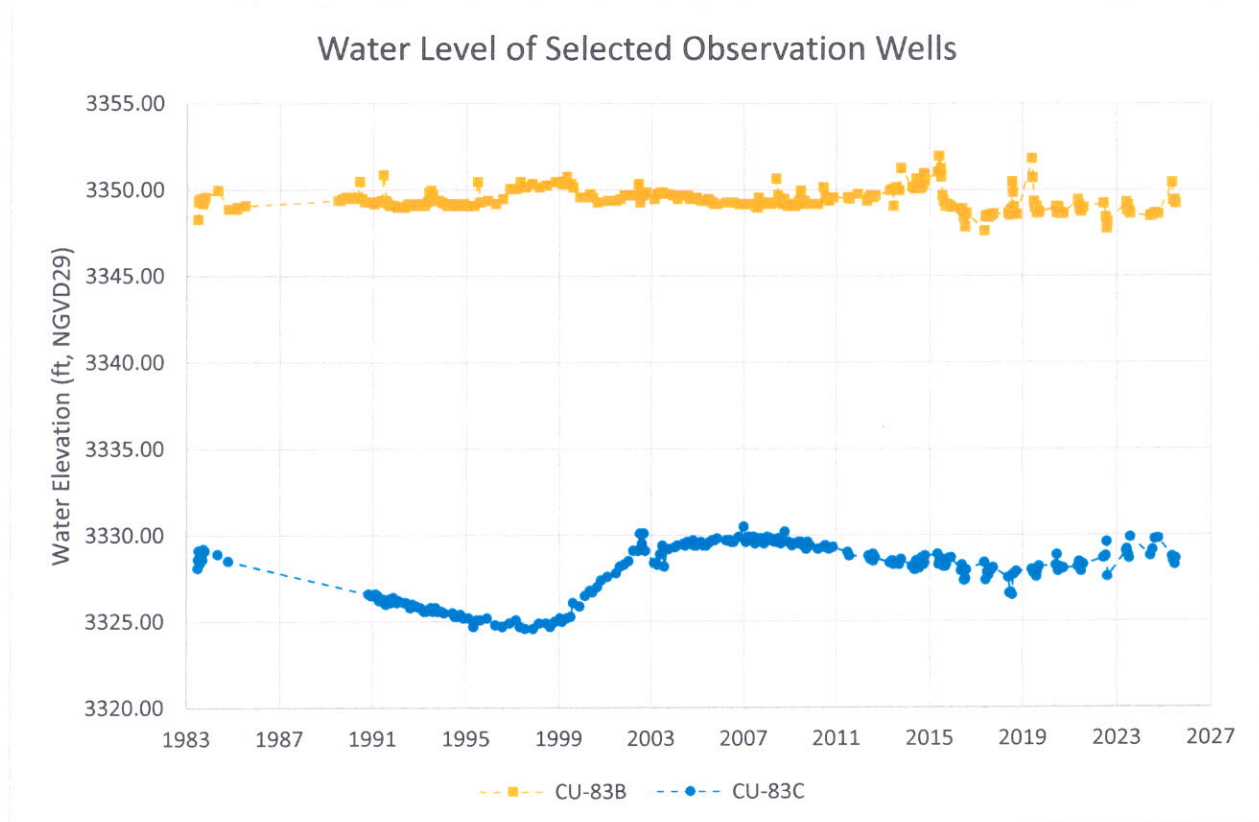


Figure 1. A hydrograph showing the elevation of water levels of observation wells CU-83B and CU-83C (Water Rights, 2026b)

Figure 1 shows the water level readings on the hydrographs for observation wells CU-83B and CU-83C have a stable to increasing water levels over their respective periods of record. The hydrographs for these observation wells were compared to hydrographs for other observations wells completed into the Inyan Kara aquifer in the Black Hills and each displayed a generally similar trend as shown on the hydrographs displayed in Figure 2 (Water Rights, 2026b).

Overall, the effects of climatic conditions are clear on the hydrographs because water levels are rising during wetter periods (early spring snowmelt and precipitation) and slowly declining to a stable water level during drier periods (NOAA, 2026). The hydrographs show the aquifer consistently recovers seasonally and the stable to rising water levels in observation wells show the aquifer is not being stressed by pumping. Aquifer recovery indicates that climatic conditions and therefore, recharge to and natural discharge from the aquifer govern changes in the water level of the Inyan Kara aquifer rather than pumping. That means recharge to and natural discharge from the aquifer greatly exceeds withdrawals. By recognizing that both recharge to and

natural discharge from an aquifer can be captured for pumping, the observation well hydrographs demonstrate there is a reasonable probability unappropriated water is available for the proposed appropriation.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

The closest water right/permit (not held by the applicant) to the proposed diversion point is Water Right No. 744B-2 which is held by the Town of Hermosa. The diversion point for Water Right No. 744B-2 is located approximately 0.5 miles southeast from the proposed application site (Water Rights, 2026c). There are domestic wells on file with the DANR-Water Rights Program that are completed into the Inyan Kara aquifer, with the closest domestic well on file (not held by the applicant) is located approximately 0.5 miles southeast of the proposed diversion point, based on the location identified by the well driller on the well completion report submitted by the driller (Water Rights, 2026d). There could potentially be other domestic wells completed into the Inyan Kara aquifer near the diversion point that are not on file with the DANR-Water Rights Program.

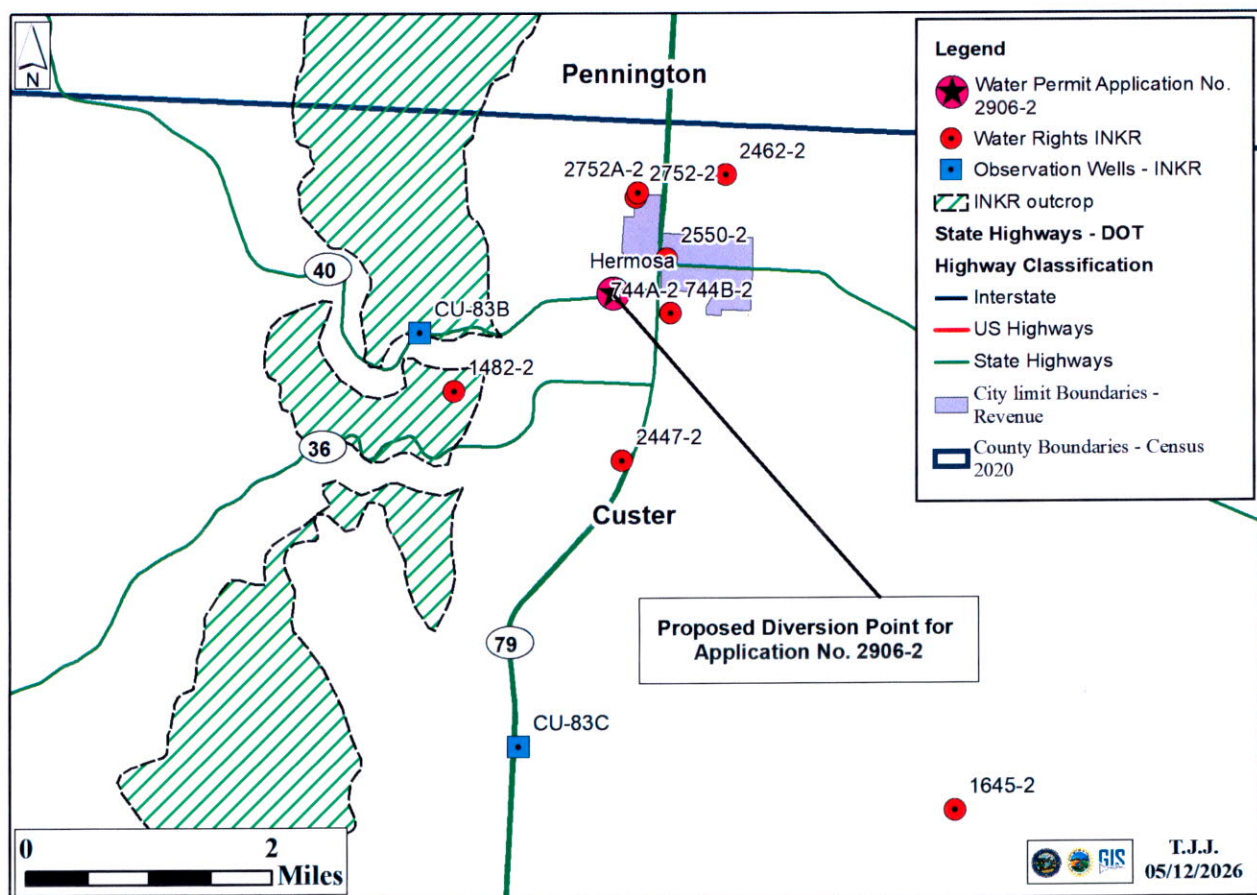


Figure 2. Location of the proposed diversion point to be used by Water Permit Application No. 2906-2 (Water Rights, 2026d), Inyan Kara outcrop in the Black Hills in South Dakota (Martin & others, 2004), with Inyan Kara aquifer water rights/permits and observation wells within approximately five miles (Water Rights, 2026b & 2026c)

Table 4. List of water rights/permits shown in Figure 3 (Water Rights, 2026c).

Permit	Name/Business	Priority	Status	Use Type	CFS
1482-2	Singletree Co.	11/08/1976	License	SHD	0.2
1645-2	Hermosa Water User Assn.	08/17/1978	License	RWS	0.6
744A-2	Town of Hermosa	07/13/1979	License	MUN	0.15
744B-2	Town of Hermosa	12/19/1979	License	MUN	0.15
2447-2	Heartland Resorts LLC	09/20/2000	License	COM	0.06
2462-2	Roland Usera	05/14/2001	License	SHD	0.09
2550-2	Town of Hermosa	01/25/2005	License	COM	0.22
2752-2	Southern Black Hills Water System	04/25/2016	Permit	RWS	0.33
2752A-2	Southern Black Hills Water System	04/25/2016	Permit	RWS	0

RWS: Rural Water System; SHD: Suburban Housing Development; MUN: Municipal; COM: Commercial

The Inyan Kara aquifer is primarily under confined conditions (Water Rights, 2026b and 2026d). In a confined aquifer, drawdown from a pumping well can extend some distance from the well. The Water Management Board recognizes that putting water to beneficial use requires a certain amount of drawdown to occur. The Board has developed rules to allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

“A well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner’s needs.”

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use during the issuance of Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Board adopted the Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, “general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable...” (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered as an unlawful impairment, it would also conflict with SDCL 46-1-4 (Water Rights, 1995). Reviewing the complaint files for Pennington and Custer Counties do not show any record of well interference complaints for Inyan Kara aquifer wells (Water Rights, 2026e). When considering the statutes (SDCL 46-1-4 and 46-6-6.1), rules (ARSD 74:02:04:20 (6) and (7)) and the saturated thickness of the Inyan Kara aquifer, the existence of these wells for a number of years, and lack of well interference complaints in Pennington and Custer Counties, any drawdown created from the diversion is not expected to cause an unlawful impairment to existing water right/permit holders or domestic users with adequate wells. Therefore, there is a reasonable probability that any

interference from the proposed appropriation will not impose unlawful impairments to existing users with adequate wells.

SPECIAL CONSIDERATION: WELL CONSTRUCTION

Any additional or replacement wells that may be constructed for this proposed appropriation must meet the adequate well construction standards as defined in ARSD 74:02:04:20, specifically defined in 74:02:04:20(6):

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

The alternative well construction requirements for certain Inyan Kara aquifer wells (74:02:04:36) are not permitted for appropriative uses. Furthermore, any future additional or replacement wells shall meet the adequate well construction standard as defined in ARSD 74:02:04:20.

CONCLUSIONS:

1. Water Permit Application No. 2906-2 proposes to appropriate up to 30 acre-feet of water annually at a maximum pump rate maximum diversion rate of 0.067 cfs from one well to be completed into the Inyan Kara aquifer (approximately 1,100 feet deep) located in the W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 31-T2S-R8E for commercial use. This site is located in Custer County, approximately half a mile southwest of Hermosa, SD.
2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the Inyan Kara aquifer to supply the proposed appropriation.
3. There is a reasonable probability that the diversion by Water Permit Application No. 2906-2 will not unlawfully impair adequate wells for existing water rights/permits and domestic uses.
4. If this application is approved, any future replacement wells or new wells must meet the adequate well definition and cannot be constructed using the alternative well construction standard in ARDS 74:02:04:36.



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References

- Allen, J.C., Iles, D.L., Petres, A.K. 1985. Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota. Tasks 3A. B. C. and 4A. B.: Groundwater Resource Inventory. Prepared for U.S. Army Corps of Engineers. South Dakota Geological Survey. Vermillion, South Dakota.
- Bredehoeft, J.D., Neuzil, C.E., and Milly, P.C.D. 1983. Regional Flow in the Dakota Aquifer: A Study of the Role of Confining Layers. U.S. Geological Survey Water Supply Paper 2237.
- CAFO Permitting Database. 2026. SD DANR Livestock Services. Joe Foss Building. Pierre, South Dakota. Accessed May 4, 2026.
- Carter, J.M., Driscoll, D.G., Williamson, J.E. 2002. Atlas of Water Resources in the Black Hills Area, South Dakota. Hydrologic Investigations Atlas HA-747. U.S. Geological Survey.
- Drinking Water Program. 2026. Public Drinking Water Systems Annual Report. SD DANR Drinking Water Program Online Database.
<<https://danr.sd.gov/OfficeOfWater/Drinkingwater/default.aspx>> Accessed April 28, 2026.
- Driscoll, D.G. & Carter, J.M. 2001. Hydrologic Conditions and Budgets for the Black Hills of South Dakota, Through Water Year 1998. Water Resources Investigations Report 01-4226. U.S. Geological Survey. Rapid City, South Dakota.
- Downey, J.S. 1986. Geohydrology of Bedrock Aquifers in the Northern Great Plains in Parts of Montana, North Dakota, South Dakota, and Wyoming. Regional aquifer-system analysis. U.S. Geological Survey Professional Paper 1402-E.
- Fahrenbach, M.D., Steece, F.V., Sawyer, J.F., McCormick, K.A., McGillivray, G.L., Schulz, L.D., Redden, J.A. 2010. South Dakota Stratigraphic Correlation Chart. Oil and Gas Investigation 3. South Dakota Geological Survey. Vermillion, South Dakota.
- Friedeman, B. and Hullinger, B.R. 2025. Personal communication on status of public water systems. August 1, 2025. Documentation for this communication found in Hullinger application files.
- Gott, G.B., Wolcott, D.E., Bowles, C.G. 1974. Stratigraphy of the Inyan Kara Group and Localization of Uranium Deposits, Southern Black Hills, South Dakota and Wyoming. Geological Survey Professional Paper 763.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A. 1982. Evaluation of Ground Water Resources, Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Tasks 1-4. Prepared for U.S. Army Corps of Engineers. South Dakota Geological Survey. Vermillion, South Dakota.
- Lobmeyer, D.H. 1985. Freshwater Heads and Ground-Water Temperatures in Aquifers of the Northern Great Plains in parts of Montana, North Dakota, South Dakota, and Wyoming. U.S. Geological Survey Professional Paper 1402-D.
- Martin, J.E., Sawyer, J.F., Fahrenbach, M.D., Tomhave, D.W., and Schulz, L.D., 2004. "Geologic Map of South Dakota," SD-DANR Geological Survey Program, Vermillion, South Dakota.

- Medler, C.J., Anderson, T.M., and Eldridge, W.G. 2025. Hydrologic Budgets and Water Availability of Six Bedrock Aquifers in the Black Hills Area, South Dakota and Wyoming, 1931-2022. U.S. Geological Survey. Scientific Investigations Report 2025-5067, 87p.,
<<https://pubs.usgs.gov/publication/sir20255067>>
- Meehan, M.A., Stokka, G., Mostrom, M. 2021. Livestock Water Requirements. Publication AS1763. North Dakota State University Extension. Fargo, North Dakota.
<<https://www.ndsu.edu/agriculture/sites/default/files/2024-04/as1763.pdf>>
- NOAA, 2026. National Centers for Environmental Information, "Climate at a Glance: Divisional Time Series," U. S. National Oceanic and Atmospheric Administration.
<<https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/divisional/time-series>> Accessed May 7, 2026.
- Schoon, R.A. 1971. Geology and Hydrology of the Dakota Formation in South Dakota. Report of Investigations No. 104. SD DANR-Geological Survey. Vermillion, SD.
- Strobel, M.L., Galloway, J.M., Hamade, G.R., and Jarrell, G.J. 2000. Potentiometric surface of the Inyan Kara aquifer in the Black Hills Area, South Dakota. Hydrologic Investigation Atlas 745-A. U.S. Geological Survey. Rapid City, SD.
- Water Rights. 1987. Water Rights File No. 5136-3, Farmland Industries. SD DANR Water Rights Program. Joe Foss Building. Pierre, South Dakota.
- Water Rights, 1995. Findings of Fact, Conclusions of Law, and Final Decision in the Matter of Water Permit Application No. 2313-2, Coca-Cola Bottling Company of the Black Hills. DANR-Water Rights Program file for Water Right No. 2313-2. Pierre, SD.
- Water Rights, 2026a. "1979-2025 Irrigation Summaries by Aquifer", SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Water Rights, 2026b. Observation Well Data, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2026c. Water Right/Permit Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2026d. Well Completion Reports, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2026e. County Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights. 2026f. 1994-2024 Non-Irrigation Yearly Reports. SD DANR Water Rights Program. Joe Foss Building. Pierre, South Dakota.



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danr.sd.gov

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

June 2, 2026

Black Hills Electric Cooperative
c/o Michelle Fisher
PO Box 792
Custer SD 57730

Dear Ms. Fisher:

Water Permit Application No. 2906-2 for commercial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Custer County Chronicle printed in Custer (Ph # 605 673-2217) and the Rapid City Journal printed in Rapid City (see attachment for contact number). 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 Acting 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,

Rachel Rodriguez

Rachel Rodriguez
Water Rights Program
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Acting Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

NOTICE OF APPLICATION NO. 2906-2 to Appropriate Water

Notice is given that Black Hills Electric Cooperative, PO Box 792, Custer SD 57730, has filed an application for a water permit to appropriate up to 30 acre-feet of water annually at a maximum pump rate of 0.067 cubic feet of water per second from one well to be completed into the Inyan Kara Aquifer (approximately 1,100 feet deep) located in the W 1/2 NE 1/4 Section 31-T2S-R8E for commercial use. The site is located approximately half a mile southwest of Hermosa SD.

Pursuant to SDCL 46-2A-2, the Acting Chief Engineer recommends APPROVAL of Application No. 2906-2 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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. The Acting Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Amanda Dewell for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Acting Chief Engineer. A petition opposing the application shall be filed on a form provided by the Acting Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Acting Chief Engineer. The Acting Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Acting Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by June 22, 2026.

The petition shall include a statement describing the unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

Any interested person may file a comment on the application with the Acting Chief Engineer. The comment shall be filed on a form provided by the Acting Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Acting Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by June 22, 2026.

If the applicant does not contest the recommendation of the Acting Chief Engineer and no petition to oppose the application is received, the Acting 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_

Rodriguez, Rachel

From: Renniel Pasia <leelegals@column.us>
Sent: Tuesday, June 2, 2026 8:41 AM
To: Rodriguez, Rachel; michellef@bhec.coop
Subject: Re: [EXT] 2906-2 Black Hills Electric Coop - Public Notice

Hi there,

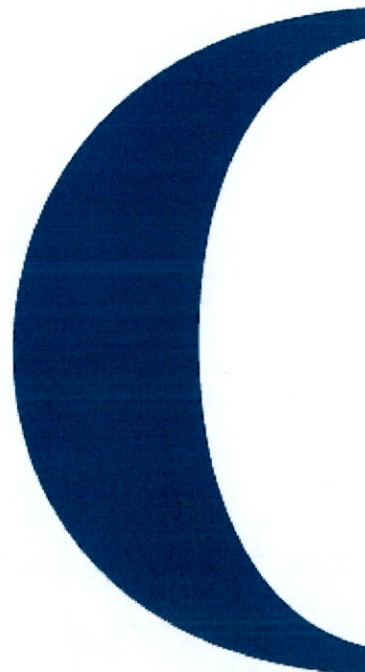
Your notice is scheduled to be published in the The Rapid City Journal on June 11, 2026.
Your Notice ID is: [BIWSt1GqBrlgPhP5nRYq](#)

You will be receiving a notification from Column Support with your proof. **Please be sure to review your proof to confirm all the information is correct.** If you don't see it, check your spam folder and any email restrictions you may have.

For the fastest and most reliable placement process, use [column.us](#) to quickly place notices yourself, get proofs, view pricing, and access your invoices and affidavits. Visit our [help center](#) for tips, or sign up for one of our [training webinars](#).

If you have any questions or concerns, please don't hesitate to let us know so we can look into it!

—
// Renniel





On June 2, 2026 at 9:14 AM EDT rachel.rodriguez@state.sd.us wrote:

Attached is a notice to be published on June 11, 2026.

Black Hills Electric Cooperative, c/o Michelle Fisher, PO Box 792, Custer SD 57730, 605-673-4461, michellef@bhec.coop 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, Attn Rachel Rodriguez, 523 E Capitol Ave, Pierre SD 57501.

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

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Tuesday, June 2, 2026 8:12 AM
To: custerchronicle@gwtc.net
Subject: 2906-2 Black Hills Electric Coop - Public Notice
Attachments: 2906-2 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on June 10, 2026.

Black Hills Electric Cooperative, c/o Michelle Fisher, PO Box 792, Custer SD 57730, 605-673-4461, michellef@bhec.coop 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, Attn Rachel Rodriguez, 523 E Capitol Ave, Pierre SD 57501.

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

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



RECEIVED

JUL 01 2026

OFFICE OF
WATER**Affidavit of Publication**

State of South Dakota)

)ss.

County of Custer)

Jerry Lee Lenander of said county, being duly sworn, on oath says that he is publisher of the Custer County Chronicle, a weekly newspaper printed and published in Custer City, said County of Custer and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein, mentioned, and was and is printed wholly or in part in an office maintained at said place of publication: that the

Black Hills Electric Coop
Notice of Application
No. 2906-2 Appropriate Water

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for one successive week(s), on which said newspaper was regularly published, to wit:

June 10, 2026; _____;

_____; _____;

_____; _____;

_____; _____;

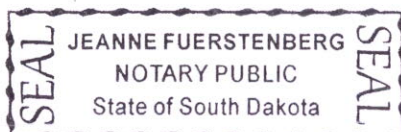
_____; _____;

the full amount of the fees for the publication of the annexed notice is \$ 43.80.

Subscribed and sworn to me before this 10th

of June, 20 26;

Jeanne Fuerstenberg
NOTARY PUBLIC
MY COMMISSION EXPIRES: **NOV 30 2027**



NOTICE OF APPLICATION NO. 2906-2

TO APPROPRIATE WATER

Notice is given that Black Hills Electric Cooperative, PO Box 792, Custer SD 57730, has filed an application for a water permit to appropriate up to 30 acre-feet of water annually at a maximum pump rate of 0.067 cubic feet of water per second from one well to be completed into the Inyan Kara Aquifer (approximately 1,100 feet deep) located in the W 1/2 NE 1/4 Section 31-T2S-R8E for commercial use. The site is located approximately half a mile southwest of Hermosa SD.

Pursuant to SDCL 46-2A-2, the Acting Chief Engineer recommends APPROVAL of Application No. 2906-2 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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. The Acting Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Amanda Dewell for this information, or other information, at the Water Rights Program address provided below.

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BOTH the applicant and Acting Chief Engineer. A petition opposing the application shall be filed on a form provided by the Acting Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Acting Chief Engineer. The Acting Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Acting Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by June 22, 2026.

The petition shall include a statement describing the unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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Published once at an approximate cost of \$43.80 and may be viewed free of charge at www.sdpublicnotices.com.

AFFIDAVIT OF PUBLICATION

Michelle Fisher

State of Florida, County of Orange, ss:

I, Ankit Sachdeva, of lawful age, being duly sworn upon oath depose and say that I am an agent of Column Software, PBC, duly appointed and authorized agent of the Publisher of The Rapid City Journal, a corporation of Rapid City, South Dakota, 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 for at least one year prior to the first date of the published notice. This affidavit is a true and corrected copy of notice which appeared in said newspaper on the following dates.

Publication Dates:

- Jun 11, 2026

NOTICE ID: BIWSt1GqBrIgPhP5nRYq

NOTICE NAME: 2906-2 Black Hills Electric Coop

TOTAL AD COST: \$77.79

Ankit Sachdeva

Agent

VERIFICATION

State of Florida
County of Orange

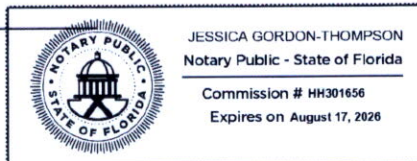
Signed or attested before me on this: 06/18/2026

J. R.

Notary Public

Notarized remotely online using communication technology via Proof.

RECEIVED
JUN 24 2026
Water Rights
Program



NOTICE OF APPLICATION NO.

2906-2 to Appropriate Water
Notice is given that Black Hills Electric Cooperative, PO Box 792, Custer SD 57730, has filed an application for a water permit to appropriate up to 30 acre-feet of water annually at a maximum pump rate of 0.067 cubic feet of water per second from one well to be completed into the Inyan Kara Aquifer (approximately 1,100 feet deep) located in the W 1/2 NE 1/4 Section 31-T2S-R8E for commercial use. The site is located approximately half a mile southwest of Hermosa SD.

Pursuant to SDCL 46-2A-2, the Acting Chief Engineer recommends APPROVAL of Application No. 2906-2 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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. The Acting Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Amanda Dewell for this information, or other information, at the Water Rights Program address provided below.

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(Published June 11, 2026 for a total approximate cost of \$77.79 and may be viewed for free at www.sd-publicnotices.com)
Legal No: COL-SD-4964

RECEIVED
JUN 24 2026
Water Rights
Program

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Tuesday, June 2, 2026 8:58 AM
To: 'michellef@bhec.coop'
Subject: 2906-2 Black Hills Electric Coop - Public Notice
Attachments: 2906-2 Rec.pdf; 2906-2 Ltr.pdf; 2906-2 PubNotice.pdf; RapidCity Info.pdf

Good Morning Michelle,

Attached is a copy of the report, chief engineer's recommendation, and information regarding the public notice for your water permit application. You will have received an email from Column which is the online portal that the Rapid City Journal uses, see attached. As stated in the letter, please contact the paper(s) as soon as possible to authorize publication and arrange for payment. This information is also being mailed to you today.

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

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

July 27, 2026

Black Hills Electric Cooperative
c/o Michelle Fisher
PO Box 792
Custer SD 57730

Dear Ms. Fisher:

Enclosed is Water Permit No. 2906-2 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,

Adam Mathiowetz, PE
Chief Engineer
Water Rights Program

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

**Affidavit of Public Notice
Posting on DANR Website**

Pursuant to SDCL § 46-2A-4, public notice of the following application was posted on the DANR web site at <https://danr.sd.gov/public>. The posted public notice is the same notice as published in the pertinent newspaper(s) and a copy of the public notice is maintained in the application file. If the application is contested, the posting is moved to the DANR contested case website at <https://danr.sd.gov/public/ContestedCase.aspx> until final action is taken on the application pursuant to SDCL § 46-2A-4.

Application No.: 2906-2

Name of Applicant: Black Hills Electric Cooperative, c/o Michelle Fisher

Date of Posting: 6/9/2026

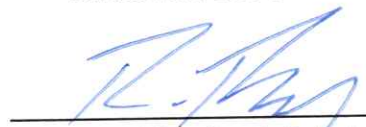
Date of Removal: 7/27/2026


Amanda Dewell, Permitting Administrator

7/27/2026

Date

Subscribed and sworn to before me, a notary public, this 27th day of July, 2026.


Notary Public - South Dakota
My commission expires:

**Rachel Rodriguez
My Commission Expires
May 16, 2029**

(SEAL)

