

WATER PERMIT NO. 2752-2

Name of Applicant: **Southern Black Hills Water System**

Address: **26858 Hwy 385, Hot Springs SD 57747** Phone: **605 745-4669**

Amount of Water Claimed: **0.11 cfs** Total Acres: **NA**

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

Water to be used for: **rural water system use** County: **Custer**

Type of Waste Disposal System:

Location: **1/2 mile northwest of Hermosa**

PRIORITY Date Received: **4-25-16** Application/License Fee: **\$ 700**

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

Remarks:

Diversion Point: **SE 1/4 NE 1/4 Sec 30-T2S-R8E**

Land to be Irrigated: **NA**

Depth of Well: **500 feet deep**

Well Driller: **Alexander Drilling Co.**

Remarks:

Type of Map: **plat**

Prepared by:

Reviewed and the Number Assigned on: **4-26-16**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

			30	⊗	

Mail to: DENR - Water Rights 523 E. Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2752-3</u>	(office use only) Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>	
	Newspaper <u>Custer Co. Chronicle</u>	<u>605-673-2211</u>
	<u>Rapid City Journal</u>	<u>605-394-8300</u>

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APR 25 2016
WATER RIGHTS PROGRAM

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

Check use(s) of water:

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

Type of Application: (check one)

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

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

- Name to Appear on Water Permit Southern Black Hills Water System
Mailing Address 26858 Highway 385 Hot Springs SD 57747
(Address) (City) (State) (Zip Code)
Phone 605-745-4669 Mobile _____ Email sbh@goldenwest.net
- Amount of water claimed 0.11 *CFS or 50 **GPM and 79.67 ***AF or 86,280,000 Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use)
- Source of water supply Inyan Kara
- Location of point of diversion SE 1/4 NE 1/4 Sec 30 Twp 2S Rg 8E 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? Rural Residents in Custer, Pennington Counties
(example - NW 1/4 section 12-T104N-R53W)
- County or counties where water will be used Custer, Pennington
- Annual period during which water is to be used January 1 to 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)
Water will be for Rural water System and Bulk user for the Town of Hermosa

I, Don Peterson Manager SBHWS, 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.

**SOUTH DAKOTA
WATER PERMIT NO. 2752-2**

Date of first receipt of application April 25, 2016.

Date of receipt of corrected application June 6, 2016.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2752-2 to Southern Black Hills Water System, c/o Don Peterson, Mgr, 26858 Hwy 385, Hot Springs SD 57747 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. 2752-2 appropriates 170 acre feet of water annually at a maximum diversion rate of 0.33 cubic feet of water per second from one well completed into the Inyan Kara Aquifer (500 feet deep) located in the SE 1/4 NE 1/4 Section 30-T2S-R8E.
2. The water appropriated shall be used for the purpose of rural water system use and may not exceed the amount of water needed for beneficial use. The system will serve the Town of Hermosa as a bulk user and rural water users in Custer and Pennington Counties.
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. 2752-2 is July 11, 2016.
5. The date from which applicant may claim right is April 25, 2016.
6. One-fifth of the construction is to be completed on or before January 11, 2019.
7. All construction is to be completed on or before July 11, 2021.
8. Water is to be put to beneficial use on or before July 11, 2025.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 2752-2 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit No. 2752-2 is limited to an annual diversion of 170 acre feet of water from the Inyan Kara aquifer.
3. Southern Black Hills Water System shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara aquifer.

WATER MANAGEMENT BOARD

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

JUL 21 2016
date



Supplemental Information

(type or print)

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

- a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☐ No Drilled by ____
(if yes, please provide copies of logs)
- b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by Alexander Drilling

For either Existing or Proposed Wells:

- c) Well Depth (required) 500 ft Depth to Top of Water Bearing Material 460 ft Depth to Water from Surface 125 ft
- d) Distance to nearest domestic well on applicant's property none 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)

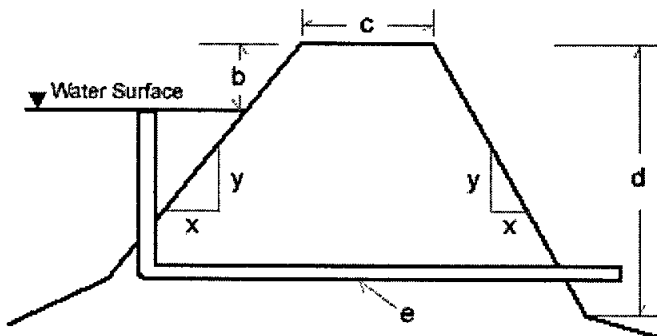
Upstream _____

Downstream _____

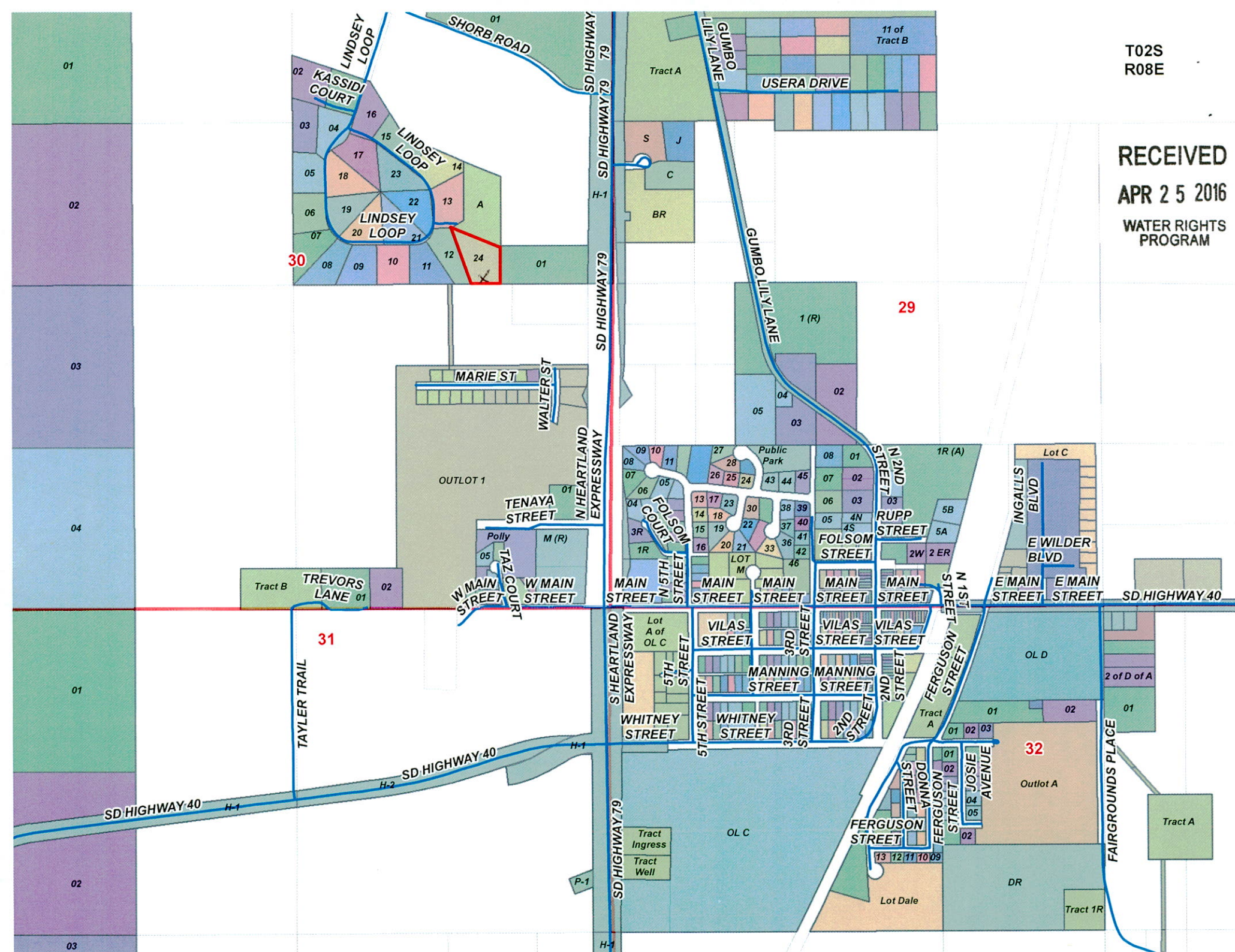
- h) Surface Area of Impoundment _____

- i) Storage _____ Acre Feet

- j) Drainage Area Above Dam _____ Acres



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T02S
R08E

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31

32



Lot 24

SOUTH DAKOTA WATER WELL COMPLETION REPORT

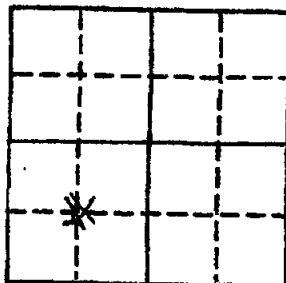
11-02

Location W 1/2 NE 1/4 Sec 30 Twp 2S Rg 8E

County

Custer

North



Please mark well location with an "X"

Well Completion Date

12/9/04

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

500 ft from Septic (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary Downhole Hammer

CASING DATA:

If other describe 460' of 5" Certilok

PIPEWEIGHT LB/FT	DIAMETER IN	FROM FT	TO FT	HOLE DIAMETER IN
		<u>460</u>	<u>0</u>	<u>6 1/4</u>

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight Lb/gal	From Ft	To Ft
<u>Portland II</u>	<u>25</u>		<u>460</u>	<u>0</u>
<u>W/S - Bentonite</u>				

Describe grouting procedure

thru casing

SCREEN:

☐ Perforated pipe ☐ Manufactured
Diameter _____ inches Length _____ Feet
Material _____
Slot Size _____ Set From _____ Feet to _____ Feet
Other information

Casing Set in Ld Rock

WAS A PACKER OR SEAL USED?

☐ Yes ☐ No

If so, what material?

Describe packer(s) and location

open hole

DISINFECTION:

Was well disinfected upon completion?
☒ Yes, How? Wichlorine solution
☐ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner:

Business Name:

40 RL Construction

Address:

Paramount Point

City, State, Zip:

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Shale Blk.</u>	<u>0</u>	<u>460</u>
<u>Sandstone Brown Full Ruler</u>	<u>460</u>	<u>490</u>
<u>Shale grey</u>	<u>490</u>	<u>500</u>

STATIC WATER LEVEL

125

FEET

If flowing: closed in pressure

PSI

GPM flow 50-60 through

inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate

GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: w/air
☐ Bailed
☐ Other

Pumping Level Below Land Surface

FL After	Hrs. pumped	GPM
_____	_____	_____
_____	_____	_____

If pump installed, pump rate: _____ GPM

REMARKS

set pump @ 450'

This well was drilled under license # 324

And this report is true and accurate.

Drilling firm:

Keweenaw Drilling Co.

Signature of Licensed Representative:

[Signature]

Signature of Well Owner or Equitable Property Holder:

[Signature]

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Date:

FEB - 2 2005

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South Dakota Department of Environment and Natural Resources

Date 4/25, 20 16

RECEIVED OF Southern Black Hills Water System 26858 US Hwy 385 Hot Springs SD 57747

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

Fee for Application for Permit No. <u>2752-2</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>2752-2</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	700 00

No. **07838**

By Jeanne Goodman
Chief Engineer

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 6/6, 20 16

RECEIVED OF Southern Black Hills Water System 26858 US Hwy 385 Hot Springs 57747

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

Fee for Application for Permit No. <u>2752-2</u> to Appropriate Water, to construct and to put water to beneficial use	250	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. _____		
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	250 00

No. **07851**

By 
Chief Engineer

Schlaak, Karen

From: Bruels, Andrew
Sent: Thursday, April 14, 2016 11:15 AM
To: Gronlund, Eric; Buhler, Ken
Cc: Schlaak, Karen
Subject: RE: SBHWS

I actually just hung up with Don on this, and yes we are meeting with SBH and the town of Hermosa next week. It sounds like there are still several moving parts and the town seems to be looking at back peddling from connections to SBH. Don mentioned that there is a possibility of connecting some additional users north of town, but he needs to look at things closer and see what kind of number of users and location it would take to get to them.

He mentioned he thought he was going to contact Mr. Bishop and ask him to wait until October for their option on the well so they could review some possible scenarios and to have a more realistic timeframe to get things in to your group for the water right.

Andy

-----Original Message-----

From: Gronlund, Eric
Sent: Thursday, April 14, 2016 11:01 AM
To: Bruels, Andrew; Buhler, Ken
Cc: Schlaak, Karen
Subject: RE: SBHWS

Don Peterson called. They were getting an application together for this well with the hopes of bringing before the WM Board in July. I went through the timing. He was interested in what newspaper the public notice would need to be published. He also said that they are meeting with the town of Hermosa about providing them 30 gpm from the well.

I also said that if there are no red flags in our review, DENR would likely public notice in a manner that if no one petitions in opposition the permit can be issued based on the recommendation and not go before the Board.

Finally, he said they were meeting with Andy in a week or so presumable about funding for the Paromont Point project.

-----Original Message-----

From: Bruels, Andrew
Sent: Friday, February 05, 2016 9:50 AM
To: Gronlund, Eric; Buhler, Ken
Subject: RE: SBHWS

The development is Paromont Point, and the current owner is Marvin Bishop.

From: Gronlund, Eric
Sent: Friday, February 5, 2016 9:38 AM
To: Buhler, Ken
Cc: Bruels, Andrew
Subject: SBHWS

Don Peterson called. Andy previously gave me a heads up on the issue.

There is a small housing development near Hermosa called Terramont ?sp? that serves 11 homes. The owner is a Mr. Bishop that wants to turn the system over to SBHWS. According to Don Peterson, the well was drilled in about 2005 but I could not immediately find a well completion report.

Don indicated there is still a lot of work to do including having Alexander drilling test pump the well before they enter into an agreement with Mr. Bishop. Their hope is to get 50 – 60 gpm of production from the well and use 30 gpm to serve the town of Hermosa.

He indicated there isn't a water right currently in place. I said if it is a water distribution system that supplies 18 gpm or less, a water permit would not have been required.

Once they get farther along they anticipate filing for a water permit.

Gronlund, Eric

From: Don Peterson <sbh@goldenwest.net>
Sent: Tuesday, April 26, 2016 2:32 PM
To: Gronlund, Eric
Subject: RE: water permit application for Southern Black Hills Water System

Eric, The annual volume will be 26,280,000 gallons. If you need anything else let me know. Thanks Don

From: Gronlund, Eric [<mailto:Eric.Gronlund@state.sd.us>]
Sent: Tuesday, April 26, 2016 9:39 AM
To: 'sbh@goldenwest.net' <sbh@goldenwest.net>
Subject: water permit application for Southern Black Hills Water System

This email is intended for Don Peterson.

DENR Water Rights Program is in receipt of SBHWS's water permit application for the existing well near Hermosa. The application requests an appropriation of 50 gallons per minute. In addition to the pump rate the application needs to include the annual volume in either gallons/year or acre feet/year. In calculating the annual volume, be reasonable but also plan for the maximum annual volume of use from the well at full development.

Let me know if you have questions.

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

Schlaak, Karen

From: Gronlund, Eric
Sent: Tuesday, May 17, 2016 2:49 PM
To: Buhler, Ken; Goodman, Jeanne
Cc: Bruels, Andrew; Schlaak, Karen
Subject: Southern Black Hills Water System

SBHWS has an application pending to appropriate 80.7 ac-ft/annually at a maximum diversion rate of 50 gpm from the Paramount Point (Bishop) well near Hermosa. The application is currently on Ken's desk awaiting a report with 60 days being June 25th.

Don Peterson call after having a discussion with their attorney Talbot Wieczorek. They are considering amending their application from 50 gpm to 200 gpm and drilling a new well at the site. This is due to the fact that Hermosa wants more water than the current well can provide and there is interest in serving more rural taps. I went through the what was necessary to amend the application. 1) diversion rate, 2) annual volume), 3) proposed construction, 4) map of new well site and 5) potential fee increase. There is the thought of initially developing under the Bishop well and within the construction period drilling the new well OR just going with the new well.

At this time Mr. Peterson is sensitive to keeping the existing application on track but wanted to make us aware that they may be amending it within the next week or so.

He then inquired about getting authorization to construct a test well so they could test pump to see the production capability of a new well. This is the Inyan Kara aquifer. I stated that type of request would have to come either in the form of a letter or email and define the location and source. I indicated it was up to the Chief Engineer on whether to grant authorization for a test well.

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May 31, 2016

Mr. Eric Gronlund
Water Rights Program
SD Dept. of Environment & Natural Resources
523 E. Capitol Ave.
Pierre, SD 57501-3182

RE: Southern Black Hills Water System, Inc.
Water Permit Application

Dear Mr. Gronlund:

Southern Black Hills Water System, Inc. (SBHWS) is submitting the enclosed revised application to appropriate water from the Inyan Kara aquifer at a location near Hermosa, SD. The point of diversion (POD) is in the northeast quarter (NE¼) of Section 30, Township 2 South, Range 8 East, in Custer County, SD. SBHWS, with this revised application, is requesting an annual appropriation of 170 acre-feet (55,188,000 gallons), at a peak withdrawal rate of 150 gallons per minute (gpm). This application replaces the application submitted previously by SBHWS requesting an annual appropriation of 26,280,000 gallons, at a peak withdrawal rate of 50 gpm, from an existing Inyan Kara well at the same POD.

SBHWS is planning to construct a new well at the POD, one with a larger diameter than the existing 5-inch diameter well. Also enclosed is a check in the amount of \$250 for that portion of the filing fee associated with the increased requested appropriation.

Thank you for your assistance with this project, and please contact me at (605) 745-4669 if you have any questions regarding this revised application.

Sincerely,

 Manager

Don Peterson, Manager
Southern Black Hills Water System, Inc.

Enclosures:

Revised Application for Permit to Appropriate Water Within the State of South Dakota
Filing Fee Check for \$250.00



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. 2752-2, Southern Black Hills Water System**

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. 2752-2, Southern Black Hills Water System, c/o Don Peterson, Manager, 26858 SD Hwy 385, Hot Springs SD 57747.

The Chief Engineer is recommending APPROVAL of Application No. 2752-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under Water Permit No. 2752-2 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit No. 2752-2 is limited to a annual diversion of 170 acre feet of water from the Inyan Kara aquifer.
3. Southern Black Hills Water System shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara aquifer.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
June 23, 2016

**REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 2752-2
SOUTHERN BLACK HILLS WATER SYSTEM, C/O DON PETERSON
JUNE 9, 2016**

Water Permit Application No. 2752-2 proposes to appropriate 170 acre-feet of water annually from the Inyan Kara aquifer at a maximum rate of 0.33 cubic feet of water per second. This application proposes to divert water from a well 500 feet deep located in the SE¼ NE¼ Sec. 30, T2S-R8E for rural water system use. The system will serve the Town of Hermosa as a bulk user and rural water users in Custer and Pennington Counties.

AQUIFER: INYAN KARA (INKR)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Inyan Kara aquifer is composed of the portions of the Lower Cretaceous age Inyan Kara Group that contain sufficient saturated permeable material to yield quantities of groundwater to wells. The Inyan Kara Group was deposited in shallow waters along the eastern shore of the Skull Creek Sea (Merewether, 1975) and in general, consists of a sequence of interbedded sandstones, siltstones, and mudstones of fluvial, lacustrine, marginal marine, marine offshore and possibly eolian origin (Waage, 1959). The Inyan Kara Group is made up of two geologic formations: the Fall River Formation and the underlying Lakota Formation. Although it is possible that the Fuson member of the Lakota formation is an aquitard in areas, on a regional scale the degree to which the Fall River and Lakota formations are hydraulically connected or separated is unclear and the two formations are typically considered parts of a single Inyan Kara aquifer (e.g. Driscoll and others, 2002; Galloway, 1999; and Strobel, and others, 2000). For the purpose of appropriations, the DENR-Water Rights Program and the Water Management Board consider the Inyan Kara a single aquifer.

The Inyan Kara aquifer occurs at a regional scale, extending into Wyoming, North Dakota and Nebraska as well as a major portion of South Dakota. The Inyan Kara underlies over 36,000 square miles and contains over 324 million acre-feet of recoverable water in storage in western South Dakota alone (Allen and others, 1985). Although the Inyan Kara is areally extensive, only a portion of the water it contains is fresh. More than one-half of the water in the Inyan Kara is moderately saline, and the water is saline to brine in parts (Driscoll and others, 2002). The Inyan Kara Group outcrops approximately 1.3 miles west of the well site proposed by this application (Pellowski and Lisenbee, 2013). The SD Water Well Completion Report submitted with this application identifies the top of the Inyan Kara Formation 460 feet below ground surface and reports 30 feet of sandstone from 460-490 feet below grade. The aquifer is under confined conditions with a static water level on December 9, 2004, reported to be 125 feet below grade.

SOUTH DAKOTA CODIFIED LAW (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is reasonable probability that there is unappropriated water available for the applicant's proposed

use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest.

WATER AVAILABILITY:

The probability of unappropriated water available for appropriation can be evaluated by considering SDCL 46-6-3.1 which requires that:

“No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source.”

If the source of the water is older or lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Although the Inyan Kara aquifer is older or lower than the Greenhorn Formation and a water distribution system is involved, a brief discussion on recharge/withdrawals from the aquifer is included below.

Water Balance:

Recharge:

Recharge to the Inyan Kara aquifer is primarily through infiltration of precipitation at the outcrop, and the aquifer also appears to be receiving water from the underlying Paleozoic aquifers in central South Dakota (Schoon, 1971; Gott and others, 1974; Lobmeyer, 1985). An average annual recharge rate has not been quantified for the Inyan Kara aquifer. However, annual recharge to the portion of the Inyan Kara aquifer that outcrops in South Dakota alone, from the precipitation component only, was estimated for 1950-1998 to be 11,600 acre-feet per year (Driscoll and Carter, 2001).

Withdrawals:

There are a total of 181 Water Rights/Permits appropriating water from the Inyan Kara aquifer in South Dakota (Water Rights 2016b). In addition, Future Use Permit No. 1780-2, Town of New Underwood, reserves 142 ac-ft/yr from the Inyan Kara aquifer for future use. One water permit application, No.1958-1, City of Sturgis, proposing to appropriate 8.1 acre feet annually is currently pending. The estimated average annual withdrawal of appropriations is less than 11,000 ac-ft/yr (Buhler, 2012). This estimate was based on: 1) annual water use reported in the latest public water system survey for municipal, suburban housing development and rural water system appropriations where applicable; 2) calculated annual use based permitted animals and rates of 20 gallons per day for beef cattle, 5 gallons per day for swine, 15 gallons per 100 turkeys per day, and 9 gallons per 100 chickens per day for large confinement operations permitted by DENR; 3) irrigation questionnaire reporting for irrigation permits when available; 4) the most current water use reported for non-irrigation appropriations that are required to report; 5) assuming unreported water rights/permits limited to an annual volume will be used to the maximum and water rights/permits limited by diversion rate will be used 60% of continuous pumping at the maximum diversion rate for their annual use period.

The estimated average annual withdrawal from the Inyan Kara (<11,000 ac-ft/yr) is less than the precipitation recharge component alone for the aquifer (11,600 ac-ft/yr). Therefore, there is a reasonable probability that there is 170 acre-feet of unappropriated water available annually to

supply this proposed appropriation. The quantities of both the average annual recharge and the average annual use for the Inyan Kara aquifer are both small percentages of the amount of water stored in the Inyan Kara aquifer so the aquifer can actually withstand several years of drought conditions with only minimal impact to wells.

The simple water budget comparing the estimated average annual recharge and the potential withdrawal by existing wells and current appropriations is not intended to suggest that all of the water that is in storage in the Inyan Kara aquifer or that all of the recharge to the aquifer is available for this appropriation, merely to demonstrate that in general the Inyan Kara aquifer is an immense resource that is relatively untapped.

Localized Hydrologic Budget:

A subarea for the Inyan Kara aquifer including the well site proposed by Water Permit Application No. 2752-2 and wells approximately up and down gradient of it was established to assess the aquifer on a more localized scale. This subarea was identified on the basis of hypothetical flowpaths that were constructed roughly orthogonal to mapped hydraulic heads from Strobel and others, (2000) for the aquifer. The subarea boundaries were selected with the intent of minimizing groundwater flow to and from adjacent subareas.

Water rights/permits appropriating water from the Inyan Kara aquifer in this area are shown in Table 1. and Figure 1. Based on the potentiometric surface for the Inyan Kara (Strobel and others, 2000) there are four water rights down gradient and one water right up gradient of the well site proposed for this appropriation (See Table 1. and Figure 1.).

Table 1. Inyan Kara aquifer appropriations in the vicinity of the well proposed by Application No. 2752-2 (Water Rights, 2016b).

PERMIT NO	NAME	PRIORITY DATE	STATUS	USE	CFS
1482-2	SINGLETREE CO	11/08/1976	LC	SHD	0.2
1645-2	HERMOSA WATER USERS ASSN	08/17/1978	LC	RWS	0.6
2074-2	PRAIRIE GARDENS INC	02/28/1989	LC	IRR (0.5 acres)	0.013
744B-2	TOWN OF HERMOSA	12/29/1961	LC	MUN	0.15
2414-2	SIGNATURE DEVELOPMENT COMPANY	10/06/1998	LC	SHD	0.1
2447-2	HEARTLAND RESORTS LLC	09/20/2000	LC	COM	0.06
2448-2	HEARTLAND CNTRY RANCHETTES	10/04/2000	LC	SHD	0.089
2462-2	ROLAND USERA	05/14/2001	LC	SHD	0.09
2543-2	HEARTLAND COUNTRY RANCHETTES	09/30/2004	LC	SHD	0.19
2550-2	TOWN OF HERMOSA	01/25/2005	LC	MUN	0.22
Appropriations in GREEN are immediately up or downgradient of the well site proposed by this application. LC= Water Right, COM= Commercial, MUN= Municipal, IRR= Irrigation, RWS= Rural Water System, SHD= Suburban Housing Development					

The estimated water usage from the Inyan Kara appropriations up and down gradient of the well this application proposes to use was estimated by assuming Water Right No. 2550-2 will use the maximum annual rate appropriated by the water right (162 acre-feet per year) and the other four appropriations will divert less than 60% of full time pumping. Note: Water Right No. 2550-2 authorizes a maximum diversion rate of 0.220 cfs. Continuous pumping at 0.220 cfs is equivalent to a rate of only 159.27 acre-feet annually. The maximum annual withdrawal associated with these appropriations is estimated to be approximately 379 acre-feet annually. Water Permit Application No. 2752-2 proposes to divert 170 acre-feet annually, which is the equivalent to 71%

of continuous pumping at a rate of 0.33 cfs. If Water Permit No. 2752-2 is approved, well withdrawals from this subunit of the Inyan Kara aquifer is expected to be less than 550 acre-feet annually.

Precipitation recharge to the Inyan Kara aquifer in this subarea can be estimated using the yield-efficiency algorithm developed by Driscoll and Carter (2001). The average annual precipitation for this area, for water years 1961-1990, was approximately 17 inches per year (Driscoll and others, 2000). Carter and others (2001) estimate that approximately five percent of annual precipitation on the Madison aquifer outcrop recharges the aquifer. Recharge to the Inyan Kara aquifer is prescribed by multiplying the total yield for the Madison aquifer by a recharge factor for the Inyan Kara. The recharge factor for the Inyan Kara aquifer is reported to be 0.80 (Driscoll and Carter, 2001). Therefore the average annual precipitation recharge to the Inyan Kara aquifer is estimated to be approximately 0.68 inches per acre per year. The Inyan Kara outcrops over approximately 8,300 acres of this subarea (see Figure 2.). With an estimated recharge rate of 0.68 inches per acre per year applied to 8,300 acres, an average annual precipitation recharge rate to this subarea is approximately 470 acre-feet annually.

“Uncertainties associated with estimates of precipitation recharge result from: (1) the methods used and associated assumptions, which may be large and cannot be quantified...; and (2) measurement of precipitation. Large uncertainties are associated with the approach that is used for generically estimating annual basin yield and yield efficiency, along with the assumption that yield efficiency is a reasonable surrogate for estimating recharge rates for the Madison and Minnelusa aquifers” (Carter and others, 2001). “Most of the uncertainties cannot be accurately evaluated because of unknowns associated with the variables involved and the broad assumptions necessary in estimating recharge” (Carter and others, 2001).

Because of the uncertainties inherent to it, the precipitation recharge estimate for this subarea should not be considered an absolute value. When considering the uncertainties associated with both estimates, the comparable values of the average annual precipitation recharge rate and the liberal estimate for potential well withdrawals from this subarea indicate there is a reasonable probability that precipitation recharge alone for this subarea will exceed average annual well withdrawals from the subarea. Since additional recharge may be available through streamflow losses, and increased well withdrawals could induce groundwater inflow from outside the subarea, there is a reasonable probability that unappropriated water is available for this appropriation.

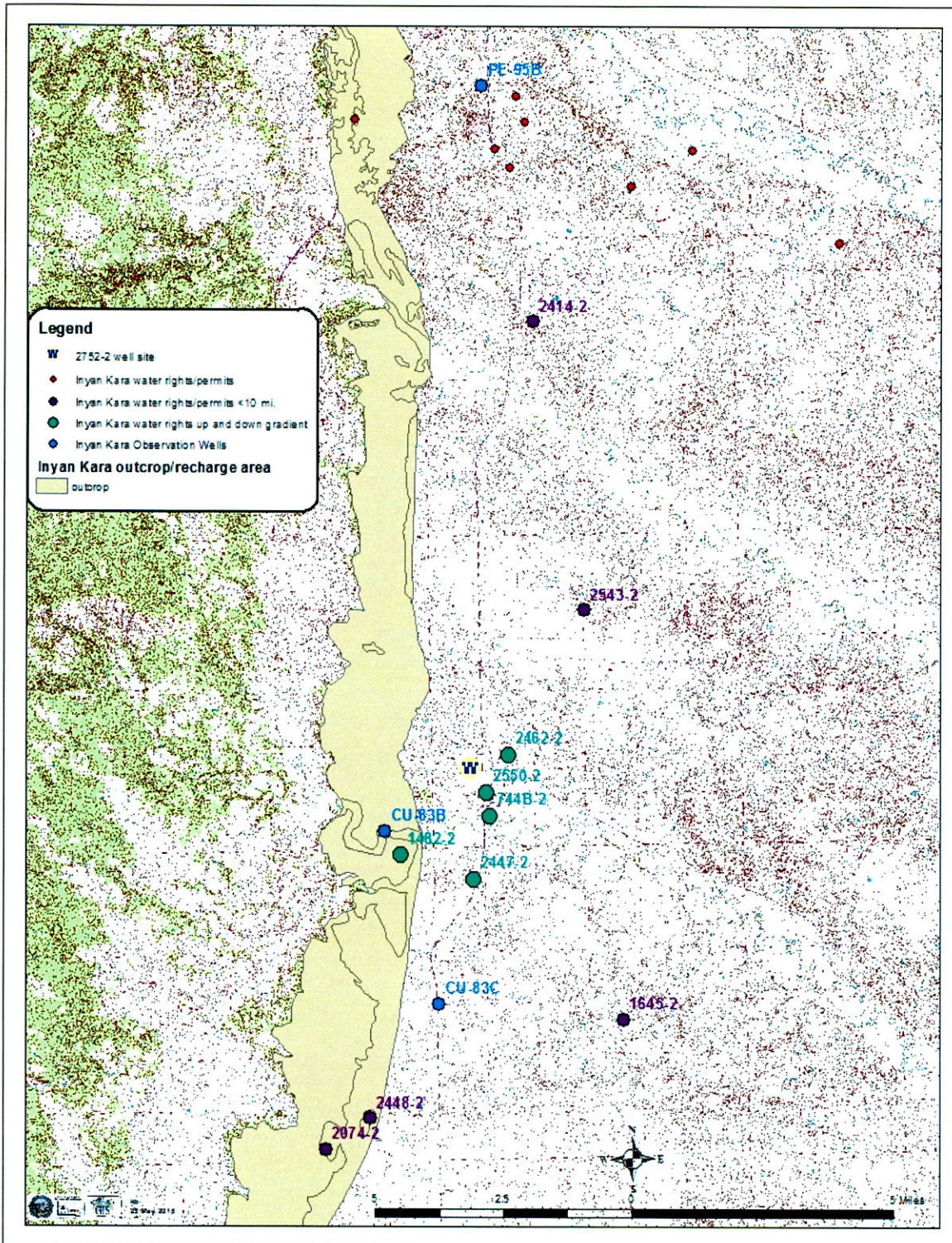
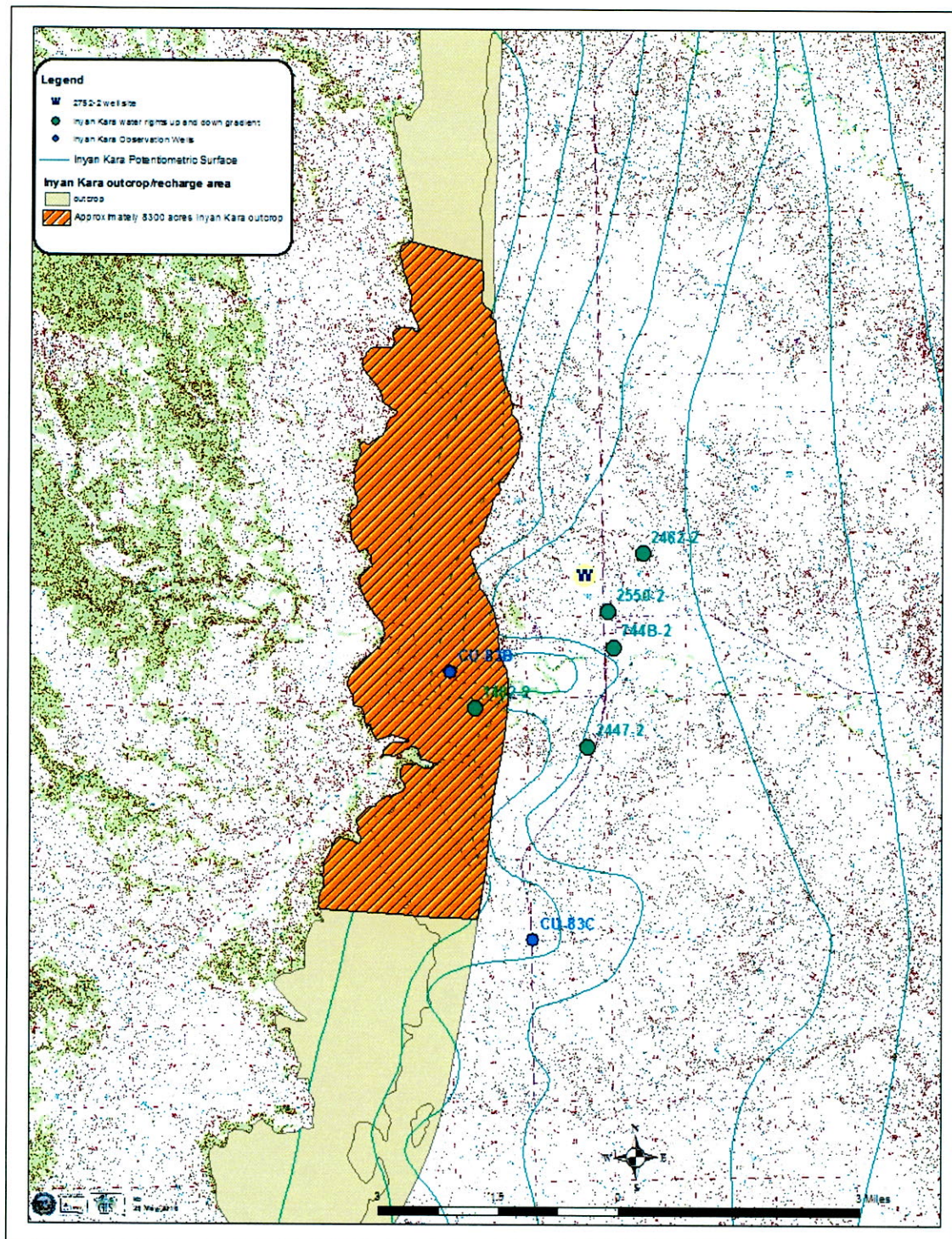


Figure 1. Map showing location of the well proposed by Water Permit Application No. 2752-2; the location of DENR-Water Rights' observation wells completed into the Inyan Kara aquifer in the area; the approximate location of existing Inyan Kara aquifer water rights/permits in the area, including up and down gradient appropriations; and the outcrop of the Inyan Kara aquifer in the area (modified from Strobel and others, 1999, Water Rights, 2016a, and Water Rights 2016b).



OBSERVATION WELL DATA:

Administrative Rule of South Dakota Section 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 DENR-Water Rights Program monitors nine observation wells completed into the Inyan Kara aquifer (Water Rights, 2016a). Hydrographs for the three observation wells located nearest the well site proposed by this application are shown in Figures 3-5.

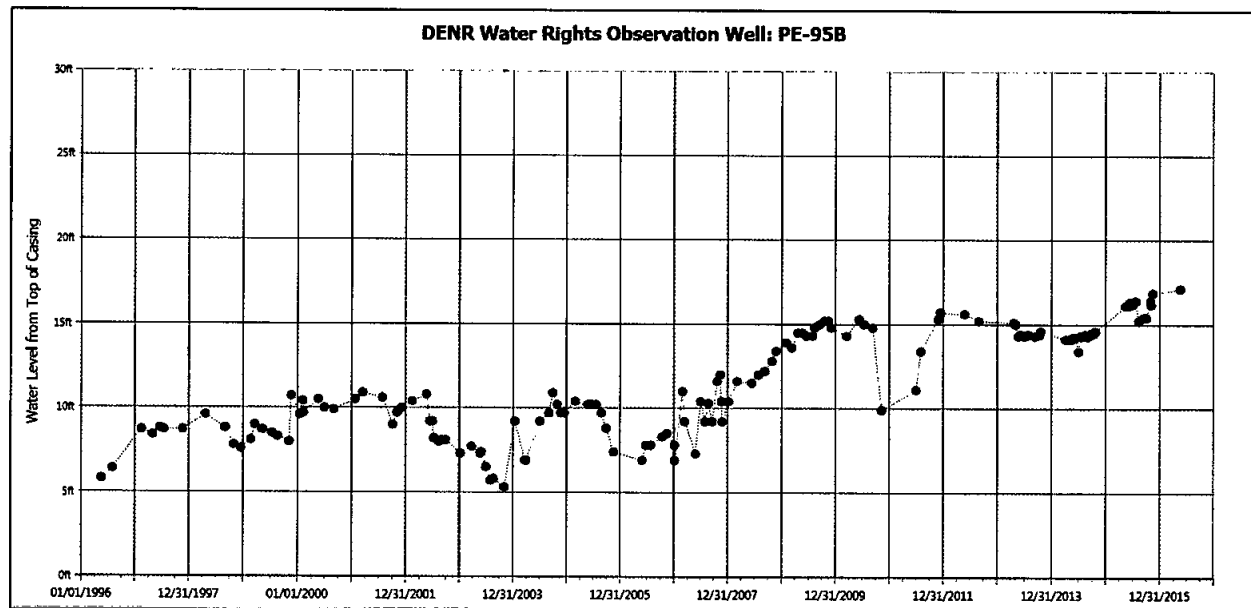


Figure 3. Hydrograph for observation well completed into the Inyan Kara aquifer approximately 13 miles north of the well that Water Permit Application No. 2752-2 proposes to use.

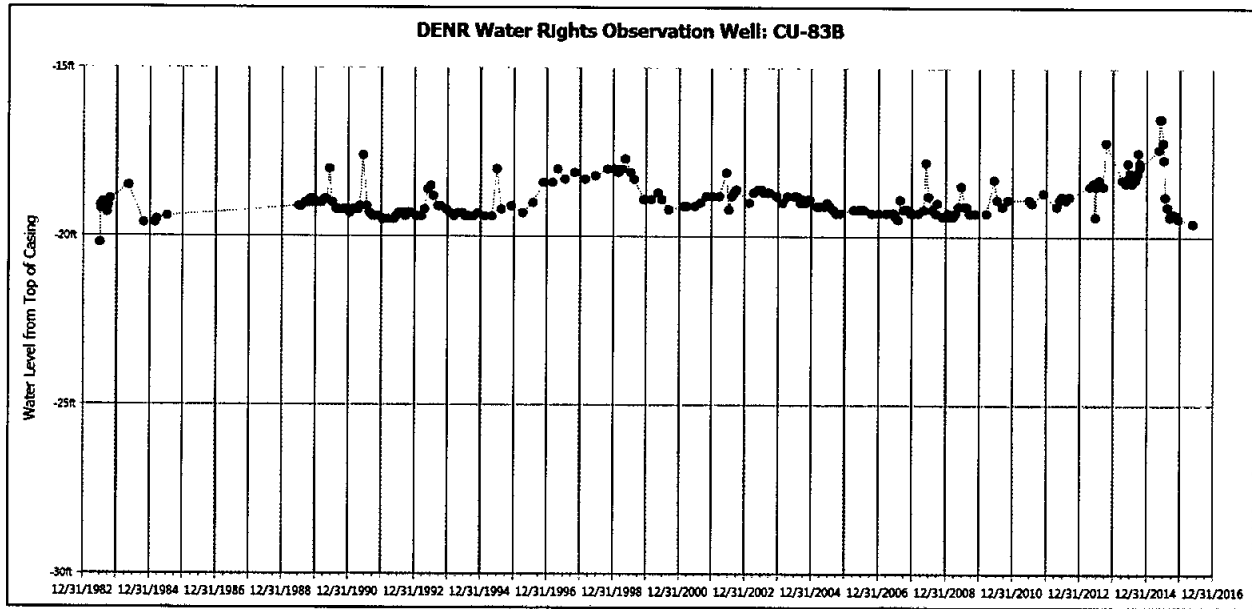


Figure 4. Hydrograph for observation well completed into the Inyan Kara aquifer approximately two miles southwest of the well that Water Permit Application No. 2752-2 proposes to use.

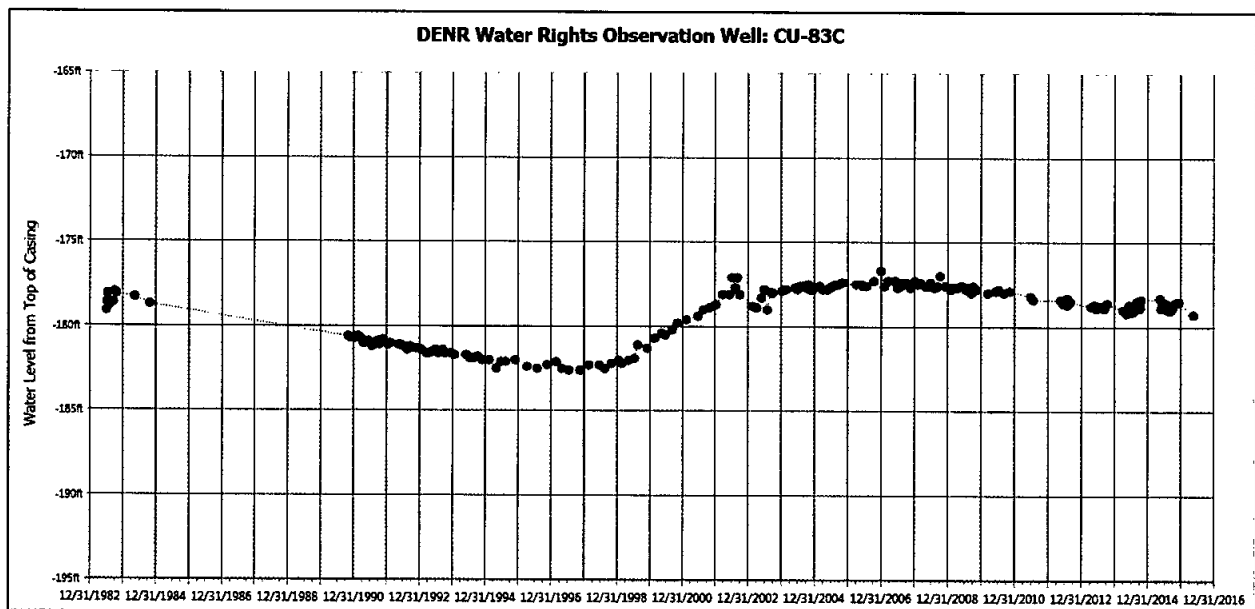


Figure 4. Hydrograph for observation well completed into the Inyan Kara aquifer approximately four and one-half miles south of the well that Water Permit Application No. 2752-2 proposes to use.

The observation well data for the Inyan Kara aquifer documents: 1) upward trending water levels; 2) that at the current level of development, climatic conditions greatly mask any temporal effects of well withdrawals thus the combined recharge to and natural discharge from the Inyan Kara aquifer significantly exceeds long term well withdrawals; and 3) the potentiometric surface

of the aquifer has been relatively unchanged over time. Therefore, the observation well data shows that unappropriated water is available from the Inyan Kara aquifer.

AFFECTS ON EXISTING WATER RIGHTS:

Water rights/permits supplied by sources other than the Inyan Kara aquifer are not expected to be affected by Inyan Kara aquifer withdrawals since the aquifer is confined by the overlying Skull Creek shale and the underlying Morrison formation separates the aquifer from lower aquifers in this area.

There are a number of reports on file with the DENR-Water Rights Program for domestic use wells that are completed into the Inyan Kara aquifer in this area (Water Rights, 2016c). Water rights/permits appropriating water from the Inyan Kara aquifer in this area are shown in Figure 1 and Table 1.

Since the Inyan Kara aquifer is under confined conditions, the artesian pressure of the aquifer is subject to fairly significant fluctuations due to pumping. Drawdown from withdrawing water from a well may extend over a fairly large area. At this time, it is not practical to attempt to quantify the specific affect withdrawals from this well may have on area wells since aquifer characteristics have not been determined for this area.

Wells supplying existing Water Rights/Permits and domestic uses are protected from adverse impacts per Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1. These rules provide for the regulation of large capacity wells to the degree necessary to maintain an adequate depth of water for a prior appropriator in wells that have the ability to produce water **independent of artesian pressure**. Simply put, the pump placement in a prior appropriator's well is not necessarily protected.

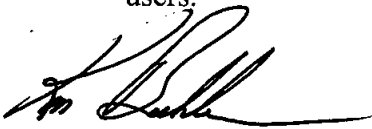
If the water levels in the Inyan Kara aquifer were to decline, owners of existing wells bear the responsibility of lowering the pump inlet in the well to the top of the aquifer, if necessary. Increased lift would decrease the pump discharge or require a larger or different type of a pump to maintain the same output.

An increase in operating expenses that may result from interference between wells is not necessarily an adverse impact. The Water Management Board considered this situation in the matter of Water Permit Application 2313-2, Coca-Cola Bottling Company of the Black Hills (Water Rights, 1995). The Board adopted findings of fact and conclusions of law that basically state that if the increased cost or decreased production is considered an adverse impact, it could be in conflict with SDCL 46-1-4, which requires South Dakota's water resources to be put to beneficial use to the fullest extent of which they are capable.

Given the distance this proposed well site is from existing Inyan Kara aquifer wells supplying water rights/permits, and the relatively insignificant drawdown expected at the pumping well, interference is not expected to be adverse.

CONCLUSIONS

1. Water Permit Application no. 2752-2 proposes to appropriate 170 acre-feet per year from the Inyan Kara aquifer at a maximum diversion rate of 0.33 cfs.
2. Approval of this application will not result in average annual withdrawals from the Inyan Kara aquifer to exceed the average annual recharge to the aquifer.
3. The Inyan Kara is a viable aquifer in this area and there is a reasonable probability that unappropriated water is available for this proposed appropriation.
4. Well interference is not expected to be significant and will not adversely impact existing users.



Ken Buhler
SD DENR-Water Rights Program

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- Water Rights, 2016b, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD
- Water Rights, 2016c, Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD

Affidavit of Publication

RECEIVED

JUL 18 2016

WATER RIGHTS
PROGRAM

State of South Dakota)

)ss.

County of Custer)

Charles W. Najacht 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

Southern Black Hills Water System
Notice of Application No 2752-1
To 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 29, 2016; _____;
_____; _____;
_____; _____;
_____; _____;

the full amount of the fees for the publication of the annexed notice is \$ 25.40.

Charles W. Najacht

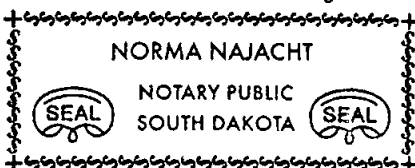
Subscribed and sworn to me before this 29th

of June, 20 16;

Norma Najacht

NOTARY PUBLIC

MY COMMISSION EXPIRES: May 5, 2018



NOTICE OF APPLICATION

NO. 2752-2

TO APPROPRIATE WATER

Notice is given that Southern Black Hills Water System, c/o Don Peterson, 26858 SD Hwy 385, Hot Springs SD 57747 has filed an application for a water permit to appropriate 170 acre feet of water annually at a maximum diversion rate of 0.33 cubic feet of water per second from one well completed into the Inyan Kara Aquifer (500 feet deep) located in the SE 1/4 NE 1/4 Section 30-T2S-R8E for rural water system use. The system will serve the Town of Hermosa as a bulk user and rural water users in Custer and Pennington Counties.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2752-2 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by July 11, 2016.

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.

Steven M. Pimer, Secretary, Department of Environment and Natural Resources.

Published once at an approximate cost of \$25.40.

6/29

Affidavit of Publication

RECEIVED

JUL 15 2016

WATER RIGHTS
PROGRAM

STATE OF SOUTH DAKOTA

County of Pennington

SS:

June 29
L20999049

NOTICE OF APPLICATION

NO. 2752-2 to Appropriate Water

Notice is given that Southern Black Hills Water System, c/o Don Peterson, 26858 SD Hwy 385, Hot Springs SD 57747 has filed an application for a water permit to appropriate 170 acre feet of water annually at a maximum diversion rate of 0.33 cubic feet of water per second from one well completed into the Inyan Kara Aquifer (500 feet deep) located in the SE 1/4 NE 1/4 Section 30-T2S-R8E for rural water system use. The system will serve the Town of Hermosa as a bulk user and rural water users in Custer and Pennington Counties.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2752-2 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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/s/ Steven M. Pirner,
Secretary,
Department of Environment and
Natural Resources.

(Published once at the total approximate
cost of \$63.40).

Carina Tyler being first duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, an employee of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, the owner and publisher of the RAPID CITY JOURNAL, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published in the English language, at and within an office maintained by the owner and publisher thereof, at Rapid City, in said Pennington County, and has been admitted to the United States mail under the second class mailing privilege for at least one year prior to the publication herein mentioned; that the advertisement, a printed copy of which, taken from said Rapid City Journal, the paper in which the same was published, is attached to this sheet and made a part of this affidavit, was published in said paper once each day for 1 successive day, the first publication there of being on the 29 day of June 2016 that the fees charged for the publication there of are 63 dollars and 40 cents.

Subscribed and sworn to before me this 19th
day of July, 2016.

Notary public

7/1/20
My commission expires

DUSTIN RICE



NOTARY PUBLIC
SOUTH DAKOTA



Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, June 23, 2016 3:55 PM
To: custerchronicle@gwtc.net
Subject: 2752-2, Southern Black Hills Water system
Attachments: 2752-2publicnov2015.short1.docx; FORM8.FRM.doc

Attached is a notice to be published on June 29, 2016.

Southern Black Hills Water System, c/o Don Peterson, 26858 SD Hwy 385, Hot Springs SD 57747 (605 745-4669) 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.

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

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, June 23, 2016 3:54 PM
To: Brandyn Crawford (Brandyn.Crawford@rapidcityjournal.com)
Subject: 2752-2, Southern Black Hills Water system
Attachments: 2752-2publicnov2015.short1.docx; FORM8.FRM.doc

Attached is a notice to be published on June 29, 2016.

Southern Black Hills Water System, c/o Don Peterson, 26858 SD Hwy 385, Hot Springs SD 57747 (605 745-4669) has been notified to contact you to authorize publication and arrange for payment.

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

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

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

June 23, 2016

Southern Black Hills Water System
Don Peterson
26858 SD Hwy 385
Hot Springs SD 57747

Dear Mr. Peterson:

Water Permit Application No. 2752-2 for rural water system 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 at Custer SD (Ph # 605-673-2271) and the Rapid City Journal printed at Rapid City SD (Ph # 605-394-8300). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,


Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 2752-2 to Appropriate Water

Notice is given that Southern Black Hills Water System, c/o Don Peterson, 26858 SD Hwy 385, Hot Springs SD 57747 has filed an application for a water permit to appropriate 170 acre feet of water annually at a maximum diversion rate of 0.33 cubic feet of water per second from one well completed into the Inyan Kara Aquifer (500 feet deep) located in the SE 1/4 NE 1/4 Section 30-T2S-R8E for rural water system use. The system will serve the Town of Hermosa as a bulk user and rural water users in Custer and Pennington Counties.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2752-2 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by July 11, 2016.

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.

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Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of_____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

JUL 21 2016

Southern Black Hills Water System
Don Peterson, Mgr
26858 Hwy 385
Hot Springs SD 57747

Dear Mr. Peterson:

Enclosed is Water Permit No. 2752-2 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

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

enclosures

Mathiowetz, Adam (DENR)

From: Gronlund, Eric
Sent: Thursday, May 10, 2018 12:55 PM
To: Mathiowetz, Adam (DENR)
Subject: FW: [EXT] SBHWS Permit 2752-2

From: Don Peterson [<mailto:sbh@goldenwest.net>]
Sent: Thursday, May 10, 2018 12:03 PM
To: Gronlund, Eric
Cc: Bruels, Andrew
Subject: [EXT] SBHWS Permit 2752-2

Eric, Southern Black Hills Water would like to drill a test well within 50 feet of the existing well Permit # 2752-2. This permit is in the SE 1/4 NE1/4 Section 30 TWP 2S Rg8E. After the well test is completed the Southern Black Hills Board of Directors will make the decision with what to do with the existing well. If you have any question please let me know.
Thanks Don Peterson Manager



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

May 10, 2018

Southern Black Hills Water System
Don Peterson
26858 Hwy 385
Hot Springs, SD 57747

Dear Mr. Peterson:

As requested, pursuant to South Dakota Well Construction Standard 74:02:04:21 you are authorized to have a licensed well driller construct a test well completed into the Inyan Kara aquifer. The test well will be located in the SE ¼ NE ¼ Section 30-T2S-R8E. All test wells must be constructed in accordance with the SD Well Construction Standards. Any test holes that are abandoned must be plugged pursuant to the SD Well Construction Standards.

Authorization must be obtained before water from the well can be used in excess of domestic use as defined by South Dakota Codified Law 46-1-6(7). Approval of this test well does not assure issuance of a water permit. Following review of a Water Permit Application and assessing the availability of water, the potential impacts to existing users, the beneficial use, and the public interest of a permit, the Chief Engineer will make a recommendation to the Water Management Board regarding the application. The recommendation to approve, deny, or defer the application will be publicly noticed and an opportunity afforded for the public to intervene. A public hearing may be required to consider the water permit. If you have questions, call Eric Gronlund at (605) 773-3352.

Sincerely,

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



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WATER RIGHTS
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506 Sixth Street
Post Office Box 8045
Rapid City, South Dakota 57709
Main: (605) 342-1078
Fax: (605) 342-9503

www.gpna.com

Matthew E. Naasz
Email: mnaasz@gpna.com
Direct Dial: (605) 719-3424

February 4, 2019

Eric Gronlund
Water Rights Program
South Dakota Department of Environment
and Natural Resources
523 E. Capitol Ave.
Pierre, SD 57501

Re: Southern Black Hills Water System, Inc.'s Application for
Amendment to Permit No. 2752-2
GPNA File No. 07653.0018

Dear Mr. Gronlund:

Enclosed please find the application of Southern Black Hills Water System, Inc. for an additional point of diversion to Permit No. 2752-2. This application is being submitted pursuant to SDCL § 46-5-13.1. The new point of diversion is from a well (Paramount Point well #2) located approximately 30 feet northeast of the existing well permitted by Permit No. 2752-2. The new diversion point is from the same source of water as Permit No. 2752-2, the Inyan Kara aquifer. The requested diversion point will not increase diversion rate or annual appropriation to Permit No. 2752-2. The application requests diversion at the new well be permitted at 50 gallons per minute or .11 cubic feet per second. Diversion at the existing well (Paramount Point well #1) will not exceed 100 gpm.

Accompanying the application is a South Dakota Water Well Completion Report for the Paramount Point Well No. 2 completed by Alexander Drilling, Inc. Additionally, a well pump test performed on the Paramount Point Well No. 2 is also enclosed. As you can see from the result of the well pump test, the new well can sustain pumping at 50 gallons per minute with limited impact on Paramount Point Well No. 1.

Southern Black Hills Water System greatly appreciates the assistance provided by the South Dakota Water Rights Program in providing the residents of southwest South Dakota a reliable source of high quality water.

Offices in Rapid City and Pierre, South Dakota

Attorneys licensed to practice in South Dakota, North Dakota, Nebraska, Minnesota, Wyoming, and Montana

If there are any questions regarding this application, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Naasz', with a long horizontal flourish extending to the right.

Matthew E. Naasz

MEN:sls

Enclosures

Cc: Client, w/encls.

SD EForm - 1585LD V5
FORM 2: Application for uses other than irrigation
(type or print)

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

Application For Permit To Appropriate Water 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. 2752-2		

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

This amendment seeks to add a point of diversion to Permit No. 2752-2. The new point of diversion is a well located approximately 30 feet northeast of the existing well permitted by 2752-2.

1. Name to Appear on Water Permit Southern Black Hills Water System

Mailing Address 26858 Hwy 385 (Address) Hot Springs (City) SD (State) 57747 (Zip Code)

Phone (605) 745-4669 Mobile _____ Email _____

** See below

2. Amount of water claimed .33 *CFS or 150 **GPM and 170 ***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 Inyan Kara aquifer

4. Location of point of diversion 1 additional well SE1/4NE1/4 Section 30 T2S, R8E County Custer
(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? Rural residents in Custer and Pennington Counties
(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Custer, Pennington

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)

This is a request pursuant to SDCL 46-5-13.1 to add an additional point of diversion to Permit No. 2752-2. The additional diversion point is a well located in the SE1/4NE1/4 Section 30 T2S, R8E, Custer County, SD. The requested diversion point is from the same source of water (Inyan Kara aquifer) and no additional appropriation of water or diversion authority is requested. Also, the water will be used for the purpose of rural water system use consistent with Permit No. 2752-2. This application requests diversion authority at the new well of 50 gallons per minute or .11 cfs. The diversion at the existing well will not exceed 100 gpm.

I, Don Peterson Name of Person Manager Title (if applicable), the applicant, certify under

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.

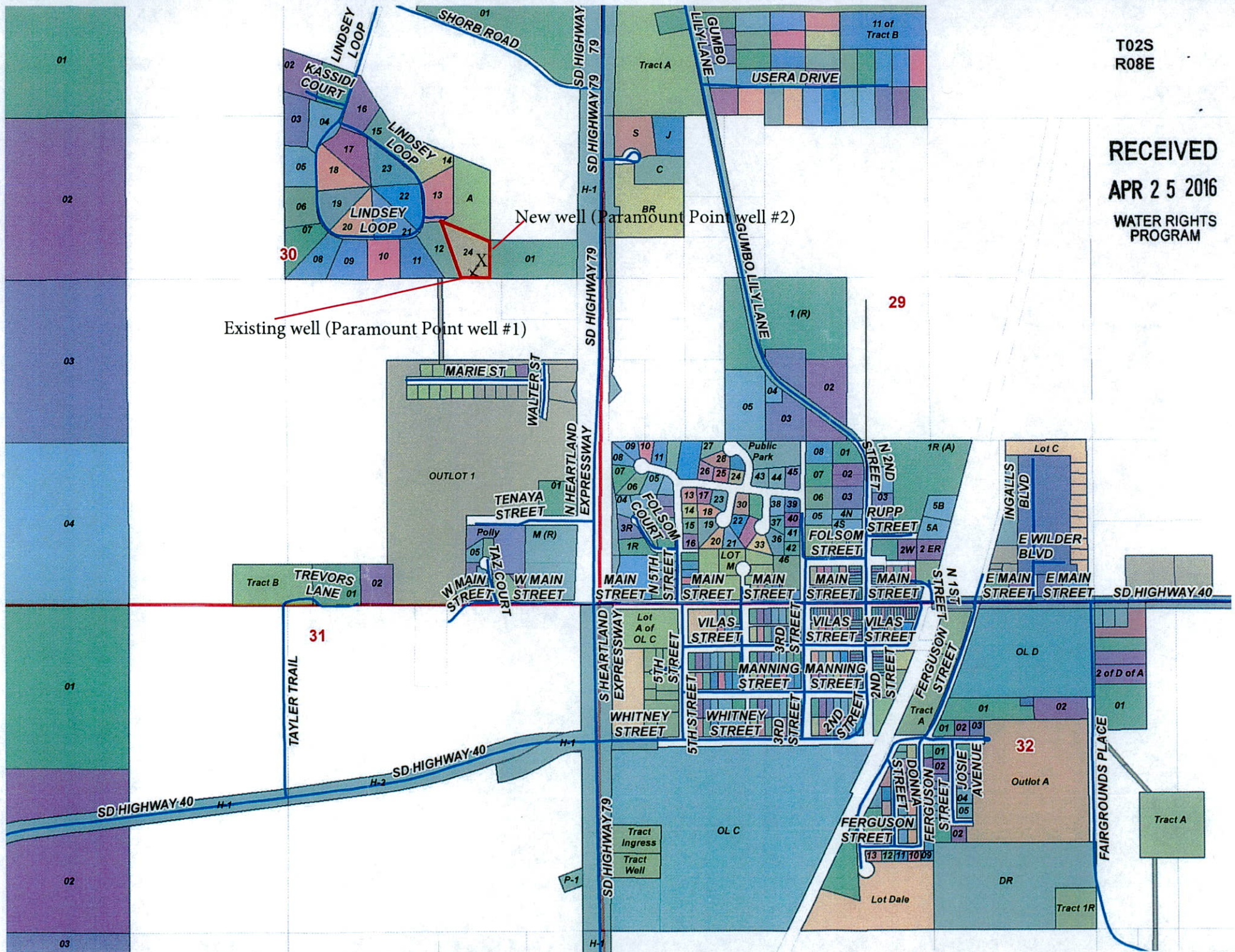
2015-10

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

** 2. No additional water is being requested.

T02S
R08E

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19

20

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New well (Paramount Point well #2)

T02S
R08E

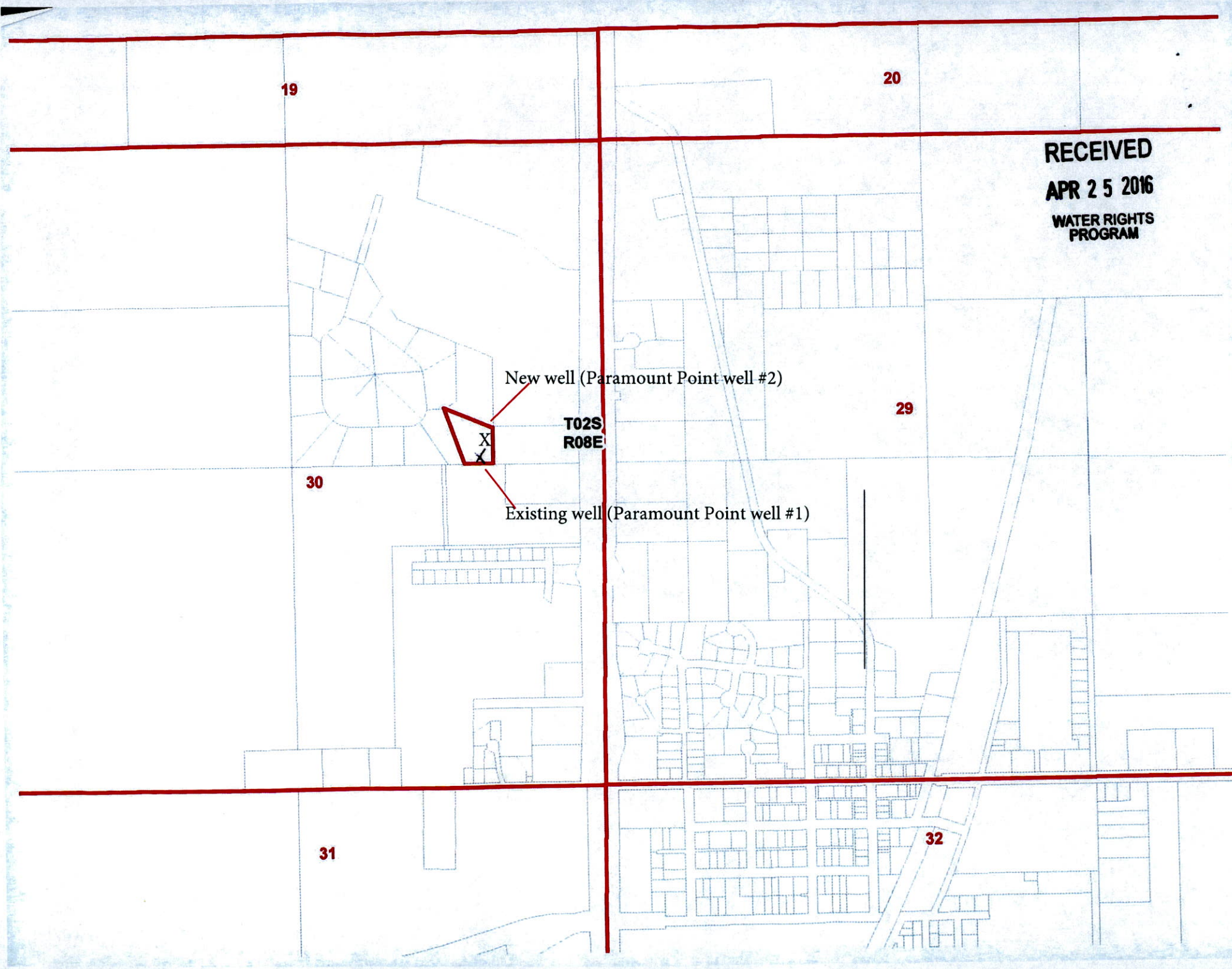
29

30

Existing well (Paramount Point well #1)

31

32

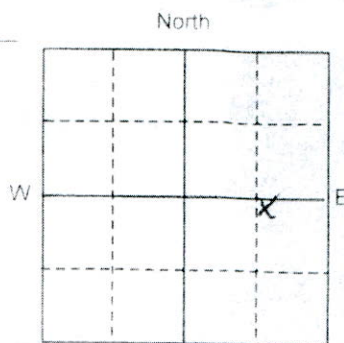


SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE ¼ SE ¼ Sec 30 Twp 2S Rg 8E

County Custer

Please mark well
location with an "X"

Well Completion Date

June 25, 2018

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary downhole hammer

CASING DATA:

☒ Steel ☐ Plastic ☐ Other
 If other describe 460' of 7" OD Steel

PIPE WEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	0.0 FT	500.0 FT	8.75 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Portland II	45	Lb/gal	460.0 Ft	0.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
through casing

SCREEN:

☐ Perforated pipe ☐ Manufactured

Diameter _____ Inches Length _____ Feet

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location _____

DISINFECTION:

Was well disinfected upon completion?

☒ Yes, How? w/chlorine solution

☐ No, Why Not?
 Lab to which water quality sample sent for analysis _____

Well Owner: Southern Hills Water - Paramount Pt. Well 2

Business Name _____

Address: 26858 Hwy 385

City, State, Zip: Hot Springs SD 57747

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Shale, black	0	460
Dakota formation 100	460	600

STATIC WATER LEVEL 125.0 FEET

If flowing closed in pressure _____ PSI

GPM flow 100.0 through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: w/air

☐ Bailed

☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 324 and this report is true and accurate.

Drilling firm: Alexander Drilling Inc.

Signature of License Representative

Signature of Well Owner or Equitable Property Holder

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Date _____

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ALEXANDER DRILLING INC.

WELL PUMP TEST		NAME	Paramont Point well #2		DATE	8-15-18
TIME	METER READING	AIR GAUGE	STATIC WATER LEVEL	GPM	TOTAL GALLONS PUMPED	
9:40	1613080	113	201	0	0	
9:45	1613555	10	439	95	475	
9:50	1613900	0	460	69	620 620	
9:55	1614195	0	460	59	1115	
10:00	1614450	0	460	51	1370	
10:30	1615980	0	460	51	2900	
11:00	1617610	0	460	51	4430	
11:30	1619040	0	460	51	5960	
12:00	1620570	6	460	51	7490	
12:30	1622100	0	460	51	9020	
1:00	1623630	0	460	51	10550	
1:30	1625160	0	460	51	12080	
2:00	1626690	0	460	51	13610	
2:30	1628220	0	460	51	15140	
3:00	1629750	0	460	51	16670	
3:30	1631280	0	460	51	18200	
4:00	1632810	0	460	51	19730	
4:30	1634340	0	460	51	21260	
5:00	1635870	0	460	51	22790	
5:30	1637400	6	460	51	24320	

462' Air line
 Pump Setting 462' 150 gpm test Pump
 Well Recovered to 95 psi in 1 hr 24 min
 Well Production 50 gpm

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 WATER RIGHTS PROGRAM

ALEXANDER DRILLING INC.

WELL PUMP TEST		NAME	DATE	
		Paramount Point Well #1	8-15-18	
TIME	METER READING	AIR GAUGE	STATIC WATER LEVEL	TOTAL GALLONS PUMPED
9:40		98	282'	
9:45		83	259	
9:50		78	270	
9:55		76	275	
10:00		74	279	
10:30		67	296	
11:00		67	296	
11:30		67	296	
12:00		67	296	
12:30		67	296	
1:00		67	296	
1:30		67	296	
2:00		67	296	
2:30		67	296	
3:00		67	296	
3:30		67	296	
4:00		67	296	
4:30		67	296	
5:00		67	296	
5:30		67	296	
Air line in well #1 450' Static water level in well #1 During Pump test on well #2 Well Recovered to 74psi in 1 hr 279' Well #1 water level 296' while well #2 pumped at 60gpm				
RECEIVED FEB 06 2019 WATER RIGHTS PROGRAM				

**Water Permit No. 2752-2
Additional Diversion Point**

Name: Southern Black Hills Water System Water Permit No. 2752-2

Address: 26858 Hwy 385 Hot Springs, South Dakota 57747

Date: February 12, 2019 **County:** Custer **Telephone:** (605) 745-4669

Background:

Water Permit No 2752-2 appropriates 170 acre-feet annually at a maximum diversion rate of 0.33 cubic feet of water per second (cfs) from one well to be completed into the Inyan Kara Aquifer (500 feet deep) located in the SE ¼ NE ¼ Section 30-T2S-R8E for rural water system use. The system will serve the Town of Hermosa as a bulk user and rural water users in Custer and Pennington Counties.

This water permit was issued based on Chief Engineer's recommendation after public notice occurred and no petitions to intervene were filed. Mr. Matthew E. Naasz, representing Southern Black Hills Water System, Inc., wrote to the Water Rights Program one additional well was requested to produce the permitted 0.33 cfs diversion rate. The additional well (600 feet deep) is located in the SE ¼ NE ¼ Section 30-T2S-R8E.

South Dakota Codified Law:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the new water source is the same as the permitted source, no additional water is appropriated, and the potential for interference with other existing diversions is not increased.

Aquifer: Inyan Kara (INKR)

The water source authorized by Water Permit No. 2752-2 is the Inyan Kara Aquifer. The original well drilled for this permit was drilled on December 9, 2004 and determined to be completed into the Fall River formation. The additional well for this permit was drilled on June 25, 2018 by Alexander Drilling. For the new well, the driller reported black shale from 0 to 460 feet below land surface and "Dakota formation 100" from 460 to 600 feet below land surface, with the static water level 125 feet below land surface at the time of drilling.

Contour maps show the land surface at that location is around 3,350 feet above mean sea level and the Inyan Kara surface elevation to be around 2,850 feet above mean sea level, putting the Inyan Kara group around 500 feet below land surface (Carter and Redden 1999). The Lakota Formation and the Fall River Formation are both part of the Inyan Kara group and considered to be the same aquifer. Because the driller's description of the materials at the depth of the second well matches geological descriptions of the Inyan Kara group formations and the depth of those materials is reasonably close to the depth the Inyan Kara group is likely to be at, it is reasonable to believe the second well is also completed into the Inyan Kara aquifer.

Amount of water diverted

Water Permit 2752-2 is limited to a maximum diversion rate of 0.33 cfs (150 gallons per minute), with an overall appropriation limit of 170 acre-feet per year. The letter from Mr. Naasz declares the maximum pump rate from the new well will be 50 gallons per minute and the maximum pump rate at the first well will be 100 gallons per minute, summing to a total of 150 gallons per minute at any given time, so no additional diversion rate is requested.

Existing diversions

According to the letter and attachments from Mr. Naasz, the new well is located about 30 feet northeast of the existing well in SE ¼ NE ¼ Section 30 T2S-R8E. This distance is not significant, so any drawdown effects from the new well would be nearly the same as if the original well was pumped at the permitted rate of 150 gallons per minute. Additionally, the first well to be impacted by the additional well would be Southern Black Hills Water System's original well for this permit.

The original report on Application No. 2752-2 reviewed the observation wells located 13 miles north (PE-95B), 2 miles southwest (CU-83B), and 4.5 miles south (CU-83C) of the location of this project and existing water rights nearby (Buhler 2016). Buhler (2016) concluded there is a reasonable probability the new well would not unlawfully impair nearby wells with prior water rights nor nearby domestic wells, a conclusion which remains valid for this request for one additional well at no additional diversion rate.

Conclusions

1. The total diversion rate will not exceed the originally permitted rate of 0.33 cfs (150 gallons per minute), so no new water is appropriated.
2. The new well is completed into the same aquifer as the original well.
3. The additional well will not cause unlawful impairment of prior water rights or domestic wells.

Recommended Action

Based on the above criteria, it is recommended that the additional diversion point location be authorized under Water Permit No. 2572-2.



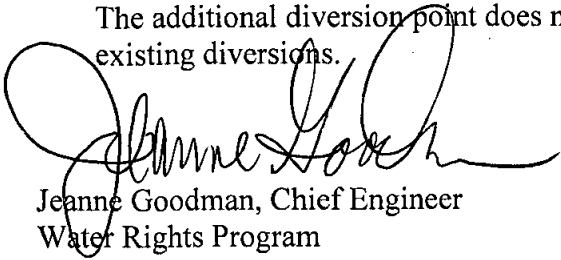
Kimberly C. Drennon
Natural Resources Engineer I

References

- Buhler, Ken A. *Report to the Chief Engineer on Water Permit Application No. 2752-2*. Joe Foss Bldg., Pierre, South Dakota: SD DENR Water Rights Program, 2016.
- Carter, Janet M., and Jack A. Redden. *Top of the Inyan Kara Group in the Black Hills area, South Dakota*. Hydrologic Investigations Atlas HA-744-A, Denver, Colorado: U.S. Geological Survey, 1999.

The Chief Engineer makes a finding pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

The additional diversion point does not increase the potential for adverse effects to existing diversions.

A handwritten signature in black ink, appearing to read "Jeanne Goodman", is written over the text of the finding and the signature line.

Jeanne Goodman, Chief Engineer
Water Rights Program



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

February 19, 2019

Matthew E. Naasz
506 Sixth Street
P.O. Box 8045
Rapid City, SD 57709

Re: Southern Black Hills Water System, Inc.'s Application for
Amendment to Permit No. 2752-2

Mr. Naasz:

Water Permit No. 2752-2 appropriates 170 acre-feet annually at a maximum diversion rate of 0.33 cubic feet of water per second (cfs) from one well to be completed into the Inyan Kara aquifer (500 feet deep) located in the SE ¼ NE ¼ Section 30-T2S-R8E for domestic use as distributed by Southern Black Hills Water System, Inc.

You requested authorization to complete one additional well located 30 feet northeast of the original well in the same legal description in order to supply the total 0.33 cfs diversion rate authorized by Permit No. 2752-2.

Upon review of the request and pursuant to SDCL 46-5-13.1, the additional well location is authorized without application or publication of a notice of hearing pursuant to SDCL 46-2A-4. No increase in the authorized diversion rate of 0.33 cfs (150 gallons per minute) from the Inyan Kara aquifer is authorized. If the total diversion rate increases above 0.33 cfs, a new water right permit will need to be obtained.

If you have any questions, please contact Eric Gronlund at (605) 773-3352.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeanne Goodman".
Jeanne Goodman, Chief Engineer
Water Rights Program

2752-2



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506 Sixth Street
Post Office Box 8045
Rapid City, South Dakota 57709
Main: (605) 342-1078
Fax: (605) 342-9503

www.gpna.com

November 18, 2020

Eric Gronlund
Water Rights Program
South Dakota Department of Environment and Natural Resources
523 E. Capitol Ave.
Pierre, SD 57501

Matthew E. Naasz
Email: mnaasz@gpna.com
Direct Dial: (605) 719-3424

Re: Paramount Point - Spring Creek Interconnection Project
GPNA File No. 07653.0020

Dear Mr. Gronlund:

Enclosed please find the application of Southern Black Hills Water System, Inc. for an additional point of diversion to Permit No. 2752-2. This application is being submitted pursuant to SDCL § 46-5-13.1. The new point of diversion is from a well (Paramount Point well #3) to be located approximately 250 feet northwest of the existing wells permitted by Permit No. 2752-2. The new diversion point is from the same source of water as Permit No. 2752-2, the Inyan Kara aquifer. The requested diversion point will not increase diversion rate or annual appropriation to Permit No. 2752-2. The application requests diversion at the new well be permitted at 50 gallons per minute or .11 cubic feet per second. Diversion at the existing wells (Paramount Point well #1 and #2) will not exceed 100 gpm.

The third well will allow Southern Black Hills to place the full amount of appropriated water by Permit No. 2752-2 to beneficial use. The water will be used for rural water system use, consistent with Permit No. 2752-2.

Southern Black Hills Water System greatly appreciates the assistance provided by the South Dakota Water Rights Program in providing the residents of southwest South Dakota a reliable source of high quality water.

If there are any questions regarding this application, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Naasz', is written over a horizontal line.

Matthew E. Naasz

MEN:aa
Enclosures
cc: client

Offices in Rapid City and Pierre, South Dakota

Attorneys licensed to practice in South Dakota, North Dakota, Nebraska, Wyoming, and Montana

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

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. 2752-2

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

This amendment seeks to add a third point of diversion to Permit No. 2752-2. The new point of diversion is a well to be located approximately 250 feet northwest of the existing wells permitted by 2752-2.

1. Name to Appear on Water Permit Southern Black Hills Water System

Mailing Address 26858 Hwy 385 Hot Springs SD 57747
(Address) (City) (State) (Zip Code)

Phone (605) 715-4669 Mobile _____ Email _____

** See below

2. Amount of water claimed .33 *CFS or 150 **GPM and 170 ***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 Inyan Kara aquifer

4. Location of point of diversion 1 additional well SE1/4NE1/4 Section 30 T2S, R8E County Custer
(example - 1 wells in SW1/4 NE1/4 section 12-T104N-R33W)

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? Rural residents in Custer and Pennington Counties
(example - NW1/4 section 12-T104N-R33W)

5. County or counties where water will be used Custer, Pennington

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)

This is a request pursuant to SDCL 46-5-13.1 to add an additional point of diversion to Permit No. 2752-2. The additional diversion point is a well to be located in the SE1/4NE1/4 Section 30 T2S, R8E, Custer County, SD. The requested diversion point is from the same source of water (Inyan Kara aquifer) and no additional appropriation of water or diversion authority is requested. Also, the water will be used for the purpose of rural water system use consistent with Permit No. 2752-2. This application requests diversion authority at the new well of 50 gallons per minute or .33 cfs. The diversion at the existing wells will not exceed 100 gpm. Permit No. 2752-2 currently authorizes diversion of .33 cfs (150 gpm).

1. Don Peterson Manager, 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.

2015-10

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

** 2. No additional water is being requested.

Supplemental Information

(type or print)

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

- a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)
- b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by Alexander Drilling, Inc.

For either Existing or Proposed Wells:

- c) Well Depth (required) 500' est. Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____
- d) Distance to nearest domestic well on applicant's property 250 feet Property owned by others approx. 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

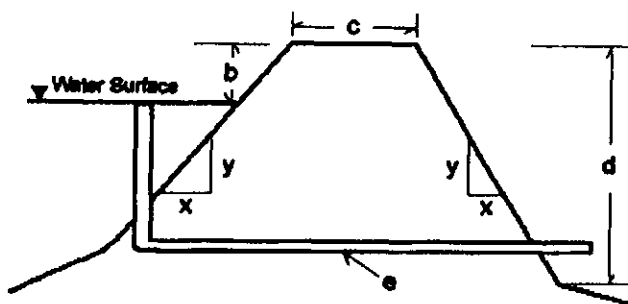
3. Dugout Information

- 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



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

November 25, 2020

Matthew E. Naasz
Southern Black Hills Water System, Inc.
26858 Hwy 385
Hot Springs, SD 57747

Dear Mr. Naasz,

I am writing in regard to the request submitted by Southern Black Hills Water System, Inc. for an additional well to what is currently authorized by Water Permit No. 2752-2.

Water Permit No. 2752-2 authorizes the appropriation of 170 acre-feet of water annually at a maximum instantaneous diversion rate of 0.33 cubic feet per second (cfs) from two wells (500 and 600 feet deep) located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 30-T2S-R8E and completed into the Inyan Kara aquifer for rural water system use. It was noted this request for a third well will allow Southern Black Hills Water System, Inc. to place the full amount of appropriated water authorized by Water Permit No. 2752-2 to beneficial use.

Upon review of the request and pursuant to SDCL 46-5-13.1, the additional well to be located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 30-T2S-R8E and completed into the Inyan Kara aquifer, is authorized without application or publication of a notice of hearing pursuant to SDCL 46-2A-4. No increase in the authorized diversion rate of 0.33 cfs from the three wells is authorized. If the total diversion rate increases, a new water right permit will need to be obtained.

Under Water Permit No. 2752-2, the construction of works deadline is on or before July 11, 2021.

If you have any questions, please contact me at (605) 773-3352.

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program

Approval of Additional Diversion Point

NAME: Southern Black Hills Water System, Inc.

ADDRESS: 26858 Hwy 385 Hot Springs, South Dakota 57747

DATE: November 19, 2020

COUNTY: Custer

TELEPHONE: (605) 745-4669

BACKGROUND:

Water Permit No. 2752-2 appropriates 170 acre-feet of water annually at a maximum instantaneous diversion rate of 0.33 cubic feet per second (cfs) from two wells (500 and 600 feet deep) completed into the Inyan Kara aquifer and located in the SE ¼ NE ¼ of Section 30-T2S-R8E for rural water system use. This system serves the Town of Hermosa as a bulk user and rural water users in Custer and Pennington Counties.

Mr. Matthew E. Naasz, representing Southern Black Hills Water System, Inc., submitted a letter on November 18, 2020 requesting one additional well (Paramount Point well #3) to be located in the SE ¼ NE ¼ of Section 30-T2S-R8E for rural water system use. Paramount Point well #3 will be 500 feet deep and will divert water at a maximum instantaneous diversion rate of 0.11 cfs (50 gallons per minute (gpm)). Mr. Naasz indicated the combined diversion rate for the two existing wells (Paramount Point well #1 and #2) will not exceed 0.22 cfs (100 gpm). Mr. Naasz noted this request for a third well will allow Southern Black Hills Water System, Inc. to place the full amount of appropriated water authorized by Water Permit No. 2752-2 to beneficial use.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed, or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The water source remains the Inyan Kara aquifer. Mr. Naasz indicated in the letter that the additional well, along with the two previously constructed wells, will not exceed 0.33 cfs (150 gpm) during operation. Therefore, no additional water is appropriated.

- **Review of existing diversions**

Mr. Naasz indicated the new well is to be located approximately 250 feet northwest of the two existing wells permitted by Water Permit No. 2752-2. Given the short distance, any drawdown effects from the new well would be nearly the same as if the original two wells were being pumped at the permitted diversion rate of 0.33 cfs (150 gpm). The additional well is to be located in the SE ¼ NE ¼ of Section 30-T2S-R8E. The closest water right (not held by Southern Black Hills Water System, Inc.) is Water Right No. 8291-3, held by Roland Usera, which is located approximately 0.75 miles northeast of the proposed and existing diversion points. Given there is no history of well interference complaints, and no additional water is to be appropriated, there is a reasonable probability the additional well will not increase the potential for unlawful impairment of existing water rights/permits, or domestic users with adequate wells within the Inyan Kara aquifer.

CONCLUSIONS:

1. The maximum instantaneous diversion rate for the two existing wells, plus the additional well, are not to exceed 0.33 cfs (150 gpm), so no additional water is appropriated from the Inyan Kara aquifer.
2. The new well is to be completed into the same aquifer as the original two wells.
3. There is a reasonable probability the additional well will not increase the potential for unlawful impairment of existing water rights/permits, or domestic users.

RECOMENNDED ACTION:

Based on the above criteria, it is recommended that the additional diversion point location be authorized under Water Permit No. 2752-2.

Nakaila Steen

Nakaila Steen
Natural Resources Engineer I
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46:5:13.1 and ARSD 74:02:01:14:01 that:

This additional diversion point does not increase the potential for adverse effects to existing diversions.

Eric Gronlund

Eric Gronlund, Chief Engineer
Water Rights Program