

WATER PERMIT NO. 2511-2

Name of Applicant: **Black Hills Health & Education Center**

Address: **PO Box 19, Hermosa SD 57744** Phone: **605 255-4101**

Amount of Water Claimed: **0.20** Total Acres: **na**

Source of Water Supply: **groundwater (6 wells)**

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

Type of Waste Disposal System:

Location: **4 miles west of Hermosa**

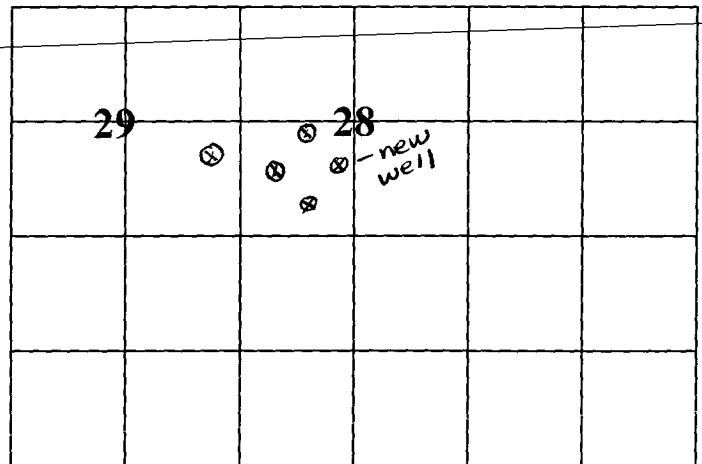
PRIORITY Date Received: **7-15-2003** Application/License Fee: **\$275**

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

Remarks:

Diversion Point: **NE ¼ SE ¼ Sec 29; NE ¼ SW ¼, SE ¼ SW ¼, NW ¼ SW ¼; Sec 28; all in T2S-**

R7E



Land to be Irrigated: **na**

Depth of Well:

Well Driller: :

Remarks:

Type of Map: **topo**

Prepared by: **Donald Stroup**

Reviewed and the Number Assigned on: **7-15-2003**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 2511-2**

Date of first receipt of application July 15, 2003.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2511-2 to Black Hills Health and Education Center, PO Box 19, Hermosa SD 57744 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. 2511-2 appropriates 0.20 cubic feet of water per second (90 gallons per minute) from 5 wells (4 existing) 75-200 feet deep (Minnelusa Aquifer) located in the NE ¼ SE ¼ Section 29; N ½ SW ¼, SE ¼ SW ¼ Section 28; all in T2S-R7E. The Center holds Water Permit Nos. 1738-2 and 1968-2 for two other wells located on the facility's property.
2. The water appropriated shall be used for the purpose of institutional 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. 2511-2 is September 22, 2003.
5. The date from which applicant may claim right is July 15, 2003.
6. One-fifth of the construction is to be completed on or before March 22, 2006.
7. All construction is to be completed on or before September 22, 2008.
8. Water is to be put to beneficial use on or before September 22, 2012.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATION

The wells approved under this Permit 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.

WATER MANAGEMENT BOARD

By: Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

OCT 10 2003

date



Mail to: South Dakota 2511-2 (office use only)
Water: Hydrologic Unit 10/20/09 **DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES**
Joe Foss Building Basin: Upper Cheyenne
523 E. Capitol Pierre, SD 57501-3182 PMB 2020
(605) 773-1313 Newspaper: Custer Co. Chronicle, Custer JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

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

Check use(s) of water:

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

Type of Application: ☐ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☒ Amendment/Correction to Permit No. 1738-2 & 1968-2

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.) Change use No. 1738-2
Incorporate Permits; Add 3 non-permitted wells and 2 planned wells

1. Name of Applicant Black Hills Health and Education Center Phone 605 255 4101
(check one) ☐ Owner ☒ Tenant/lessee
Mailing Address PO Box 2, Hermosa State SD 57744
(Street, RR, or Box and City) (Zip Code)

2. Amount of water claimed 0.20 0.33 *CFS or **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable

3. Source of water supply 7 wells 5 wells (4 existing)

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 1 well NE1/4 SE1/4 Sec. 29,
1 well NE1/4 SW1/4 Sec. 28, 2 wells SE1/4 SW1/4 Sec. 28, 2 wells NW1/4 SW1/4 Sec. 28, all T2S R7E

County Custer

5. County or counties where water will be used Custer

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)
Water used for Staff Dwellings, Lodges, and Garden Plots at the Black Hills Health and Education Center. Total Diversion Rate for the 7 Wells is estimated to total 0.33 on completion of planned wells. Five of the seven (7) wells are presently in use at BHHEC. The Center plans on drilling a new well and re-working old well by Main Lodge.

STATE OF SOUTH DAKOTA) SS
County of Custer

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

I, Arthur Garner, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Arthur Garner
Subscribed and sworn to before me this 10th day of July 2003
Shary Mellyard
Notary Public signature

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date JULY 15, 2003

RECEIVED OF Black Hills Health & Education Center, PO Box 19, Hermosa SD 57744

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

Fee for Application for Permit No. <u>2511</u> to Appropriate Water, to construct and to put water to beneficial use	225	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>2511</u>	50	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	275.00

No.

000034

By

Darland Eiche

Chief Engineer

gm

Black Hills Health & Education Center
Nos. 1738-2 & 1968-2

T2S R7E

29

28

Staff
Dwelling

Wellness-Fitness
Center

Lodge

Main
Lodge

Duplex

Irrigation

← proposed new well



Donald E. Stroup
Natural Resources Project Engineer
DNR Water Rights Program

**Permits No. 1738-2 & 1968-2
Custer County**

To: Chief Engineer, Water Rights Program, DENR Foss Bldg., Pierre, SD 57501

Other permit/license(s) associated with project: **Permit No.1901-2, Williard Werth**

Contact Person & Address: **Paul Pierson & Willard Werth, Black Hills Health & Education Center**

Report Of Examination of Works

On **June 13, 2002** I made an examination of the water use systems at the Black Hills Health and Education Center, Hermosa, Custer County, SD authorized the following appropriations:

Permit No. 1738-2 - 0.85 cubic feet per second (cfs) of water from a **320-foot** deep well in the NW¼ SE¼ Section 28 T2S R7E for **irrigation use**

Permit No. 1968-2 - 0.04 cfs of water from a **230-foot** deep well in the NW¼ SW¼ Section 28 T2S R7E for **institutional use**

Black Hills Health and Education Center was reorganizing at the time of my on-site examination. No one currently on the Center's staff has knowledge of the depths, capacities, or locations of all the wells at the Center. Doing the examination I located five (5) wells, four (4) of which were in use. One well, located behind the main lodge along Battle Creek, is no longer in use due to contamination. Paul Pierson stated that the contaminated well along Battle Creek was there before the lodge was built.

The well log database was checked on return to the office and nine (9) well logs for the Center or Willard Werth were located. ~~Six (6) wells were drilled by Howe Drilling, five (5) in 1983 and one (1) in 1985.~~ The log for the 320-foot well is supposedly the Permit No. 1738-2 water source drilled by Downen Drilling. No date or location are on this well log. Cody Tachenko submitted a log for a well by the Werth house with the application for Permit No. 1901-2. The log for the well drilled by Lewis is for the actual well drilled for Permit No. 1901-2.

I spoke with Mrs. Downen on 6/24/02. Downen Drilling is no longer in business, but Mrs. Downen has retained all the old files and well logs. Mrs. Downen has nothing on file for a 320-foot well drilled for the Center or Willard Werth. Mrs. Downen's records show a 160-foot well drilled in 1980 for the Center. This corresponds to the log for the Willard Werth well submitted by Cody Tachenko in lieu of the actual source well log for Permit No. 1901-2. Permit No. 1901-2 application lists the diversion point as in the SW¼ SW¼ Section 27 whereas the Soil/Water Compatibility Permit Application Form, South Dakota Department of Agriculture, and the log for the actual well drilled lists the diversion point as in the SE¼ SE¼ Section 28, all in T2S R7E. Permit No.1901-2 was transferred from Tachenko to Werth in 1998.

I spoke with Charles Howe, Howe Drilling on 6/25/02. Howe drilled six (6) wells for the Center and Center personnel installed the pumps. He doesn't know the capacities of the pumps installed in these wells. Howe stated that he was on the property in the 70s and the well at the main lodge was there then. He believes the wells drilled by Downen are on the Werth property, which was previously part of the Tachenko/Center property. Howe stated there was some shuffling and splitting of property between the original founders of the Center.

A letter in the Permit No. 1968-2 file from Cody Tachenko states that two wells were drilled in the Fall of 1985; a 290-foot well producing 5 gpm for a single dwelling and a 200-foot well producing 18 gpm for a small dormitory. There is only one well log on file for the fall of 1985, the 215-foot well at the Wellness-Fitness Center drilled by Howe.

On August 5, 2002 I met with Willard Werth in Rapid City and went over an Aerial-Photo Map of the Center, the well logs on file, and the wells I had located during the on-site examination. Mr. Werth located three wells on the map for dwellings at the Center. Mr. Werth noted that the Downen 320-foot well log has his father-in-law's name and address (which is lined out and Werth's name and address penciled in) on it, but he doesn't know why. He believes this 320-foot well is located at Dwelling 1. Mr. Werth also believes the 425-foot well is located at Dwelling 2 and the well at the Dormitory is 200-foot deep. He also noted the location of the well on his property for Permit No. 1901-2 in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 27 T2S R7E which doesn't correspond with the location (the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 28) noted on the well log and the Soil/Water Compatibility Permit Application Form.

Table 1 contains a summary of the well logs on file and wells located during the on-site examination:

Table 1. Summary of BH Health & Education Center Wells

Map #	Permit # & Holder	Driller & Date	Location	Depth (ft)	gpm	Purpose	Remarks
1	1738-2 BH Health	Downen Unknown	NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 28	320	40 @ 200'	IRR	Mrs. Downen has no record of this well drilled for Werth or BH Health. Location is from the application. Werth located well @ Dwelling 1.
2	1968-2 BH Health	Howe 10/13/85	NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 28	215	15	INT	Well located by GPS on-site @ Wellness-Fitness Center. Location & depth correspond to Howe well log.
3	1901-2 Werth	Lewis 3/27/85	SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 28	70	80 @ 67'	IRR	Well located by Werth in SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 27. Needs to be checked.
4	None	Howe 8/3/83	NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 28	167		DOM	Located in same quarter-quarter as #1738-2 and Dwelling 1 by Werth. Purpose and legal location taken from well log.
5	None	Howe 7/6/83	SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 28	425		DOM	Purpose and legal location taken from well log. Located @ Dwelling 2 by Werth.
6	None	Howe 7/29/83	SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 28	100	120	IRR	Well located by GPS on-site-corresponds to well log. Purpose taken from well log.
7	None	Howe 5/5/83	SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 28	77		DOM	Well located by GPS on-site @ Duplex-corresponds to well log. Purpose taken from well log.
8	None	Howe 5/5/83	NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 29	75		DOM	Located @ Dwelling 3 by Werth. Purpose taken from well log.
9	None	Downen Unknown	NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 28 T2S R7E	160	30	DOM	Well log submitted by Tachenko for Application # 1901-2. Well supposed to be by Werth house.
10	None	No Log Unknown	SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 28	200			Well located by GPS on-site. In same quarter-quarter as Dwelling 2 425-ft well. 200-foot Depth from Werth.

IRR-Irrigation INT-Institutional DOM-Domestic

Comments:

All the wells in use on the Black Hills Health and Education Center property, to include those wells at the Center's dwellings, need to be permitted for institutional use. Due to varying depths, these wells need to be permitted by source, i.e., the geologic aquifer the water is withdrawn from. Any wells not in use, such as

the one by the main lodge, should be filled and plugged in accordance with state statutes. As far as practical, the Center should determine the location, depth, and diversion rate of each well in use for permitting purposes.

The director of the Black Hills Health and Education Center should be notified of these requirements

The actual location of the Permit # 1901-2 well can be determined during an on-site licensing examination.

A handwritten signature in black ink, appearing to read "Donald E. Stroup", with a long horizontal flourish extending to the right.

Donald E. Stroup
Natural Resources Project Engineer
DENR Water Rights Program



T2S R7E

29

28

27

Dwelling 2

#5

Dwelling 1
#9, #4 & #1

#10

#2

Dwelling 3
#8

Main
Lodge

#7

#6

#3
1901-2



STATEMENT

Downen Drilling Company

Rt. 4 Box 109
Rapid City, South Dakota 57701
Phone 787-4525

*Herb Wagner is Dr. Wirth's
Father-in-law, West.*

Dr. Willard Wirth

~~Herb Wagner~~ P.O. Box 1 ~~West~~

~~Clark, S. Dak. 58550~~ Hermosa, S.D.

Terms: 1% per month after 30 days!

Date

Well Log: West of Hermosa S. Dak.

0-10' rocks & soil

10-50' red sandstone

15-100' red limestone

100-170' red sandstone

170-200' purple limestone

200-210' soft sandstone

210-150' limestone & silt

250-255' broken limestone

255-290' purple shale & limestone

290--320' limestone

Test 40 gal per min at 200'

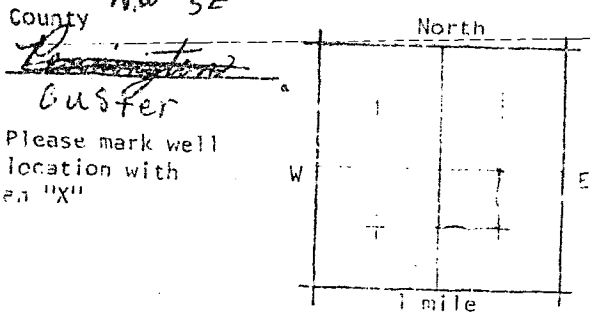
Water level 90ft. from surface.

*Herb Downen has no
copy of this log.
He'll try to get
a copy done.*

Dwelling 1?

STATE OF SOUTH DAKOTA WELL DRILLERS REPORT

Location ~~SE 1/4~~ Sec 28 Twp 25 Rq 7E
County NEW SE



Please mark well location with an "X"

Well Completion Date Aug 3, 1983

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

Method of Drilling:
Forward Rotary

WELL CONSTRUCTION:
Diameter of hole 6 inches Depth 167 feet
Casing: ☐ Steel ☒ Plastic ☐ Other
Specify 60' casing
Pipe Weight Diameter From To
1b/ft inches feet feet
1b/ft inches feet feet

Was a well screen used? ☐ Yes ☒ No
If Not Specify _____
Screen Type _____ Slot Size _____
Length _____ Diameter _____
Was Casing left open end? ☐ Yes ☒ No
Was a Packer or seal used? ☒ Yes ☐ No
If so what material? _____
Was well gravel packed? ☐ Yes ☒ No
Was well grouted? ☒ Yes ☐ No
Describe grouting procedure Cement

To what depth? 20 Feet
What was grouting material? Cement
If cement, how many sacks? _____
Location of packer(s) and screen or perforated pipe _____

WAS WELL PLUGGED OR ABANDONED ☐ Yes ☒ No
If so how and with what material? _____

Well Owner:
Name Black Hills Education Center

Address Formosa, SD Cody

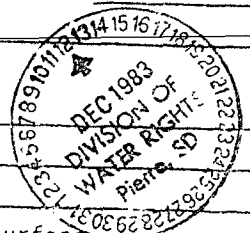
Well Log:	Depth	
Formation	From	To
<u>Shovel red shale</u>	<u>0</u>	<u>20</u>
<u>red shale, some rock</u>	<u>20</u>	<u>30</u>
<u>red shale</u>	<u>30</u>	<u>55</u>
<u>red sandstone</u>	<u>55</u>	<u>60</u>
<u>Buff sand</u>	<u>60</u>	<u>65</u>
<u>sandstone</u>	<u>65</u>	<u>80</u>
<u>sandstone</u>	<u>80</u>	<u>100</u>
<u>sandstone</u>	<u>100</u>	<u>115</u>
<u>Limestone</u>	<u>115</u>	<u>130</u>
<u>sandstone</u>	<u>130</u>	<u>165</u>
<u>Limestone</u>	<u>165</u>	<u>167</u>

STATIC WATER LEVEL _____ Feet
If flowing: closed in pressure _____ PSI
GPM flow _____ through _____ inch pipe
Controlled by ☐ Valve ☐ Reducers ☐ Other
If other: specify _____
Can well be completely shut off? _____

WELL TEST DATA:
☐ Pumped
☐ Bailed Describe: _____
☐ Other _____
Pumping Level Below Land Surface
_____ ft. After _____ Hrs. pumped _____ GPM
_____ ft. After _____ Hrs. pumped _____ GPM
_____ ft. After _____ Hrs. pumped _____ GPM

Remarks: _____

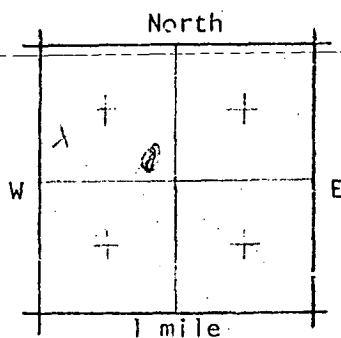
This well was drilled under license # 363
and this report is true and accurate.
Charles Howe Charles E. Howe
Drilling Firm Signed by
8/21/83 Mr. Howe
Date 12-14-83



USE 1-27-A. IT IS HEREBY CERTIFIED THAT THE FOLLOWING INFORMATION WAS OBTAINED FROM THE RECORDS OF THE DIVISION OF WATER RIGHTS, STATE OF SOUTH DAKOTA, AND ON INFORMATION WHICH MEET THE REQUIREMENTS OF THE NATIONAL BUREAU OF STANDARDS FOR PERMANENT RECORDING. REPRODUCTION. SECTION 25. FILE NO. 12-1-1. DATE RECORDED 1-15-84. CANCELLED. [Signature]

Location NW 1/4 SW 1/4 Sec 28 Twp 25 Rg 7 E

County

CusterPlease mark well
location with
an "X"Well Completion Date Sept. 13, 1985

PROPOSED USE:

☒ Domestic ☐ Municipal ☐ Test Holes
☐ Irrigation ☐ Industrial ☐ Stock

Method of Drilling:

Forward Rotary

WELL CONSTRUCTION:

Diameter of hole 6 inches Depth 215 feetCasing: ☐ Steel ☒ Plastic ☐ Other
Specify _____
 Pipe Weight Diameter From To
 lb/ft inches feet feet
 lb/ft inches feet feet
Was a well screen used? ☐ Yes ☒ No

If Not Specify _____

Screen Type Slot Size Length Diameter Was Casing left open end? ☐ Yes ☒ NoWas a Packer or seal used? ☒ Yes ☐ NoIf so what material? RubberWas well gravel packed? ☐ Yes ☒ NoWas well grouted? ☒ Yes ☐ NoDescribe grouting procedure 1 bag cementTo what depth? 20 FeetWhat was grouting material? CementIf cement, how many sacks? 1Location of packer(s) and screen or perforated
pipe _____WAS WELL PLUGGED OR ABANDONED ☐ Yes ☒ No

If so how and with what material?

Well Owner: DormName Black Hills Health + Education CenterAddress Hermosa, S.D.

Well Log:

Depth

Formation

From

To

~~CLAY~~

0

30

MINNELOSA

30

215

STATIC WATER LEVEL _____ Feet

If flowing: closed in pressure _____ PSI

GPM flow 15 through _____ inch pipeControlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify _____

Can well be completely shut off? _____

WELL TEST DATA:

☐ Pumped☐ Bailed

Describe: _____

☐ Other

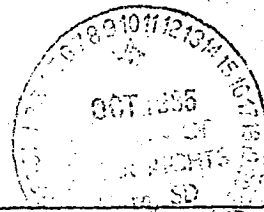
Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

Remarks:

This well was drilled under license # 3603

and this report is true and accurate.

Howe Well Drilling

Drilling Firm

Signed by

9/13/85

Date

10-29-85

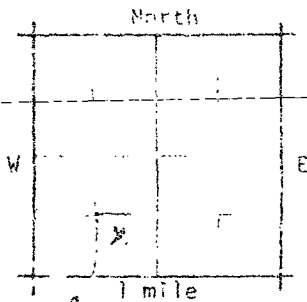
Irrigation

STATE OF SOUTH DAKOTA WELL DRILLERS REPORT

Location Sec 28 Twp 25 Rg 7E

County Cluster

Please mark well location with an "X"



Well Completion Date July 29, 1983

PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Test Holes
☒ Irrigation ☐ Industrial ☐ Stock

Method of Drilling:

Forward Rotary

WELL CONSTRUCTION:

Diameter of hole 12 inches Depth 100 feet

Casing: ☒ Steel ☐ Plastic ☐ Other
Specify _____

Pipe Weight Diameter From To
lb/ft 10 inches 6 feet 59 feet
lb/ft _____ inches _____ feet _____ feet

Was a well screen used? ☐ Yes ☒ No
If Not Specify _____

Screen Type _____ Slot Size _____
Length _____ Diameter _____

Was Casing left open end? ☐ Yes ☒ No

Was a Packer or seal used? ☒ Yes ☐ No

If so what material? _____

Was well gravel packed? ☐ Yes ☐ No

Was well grouted? ☒ Yes ☐ No

Describe grouting procedure _____

To what depth? 27 Feet
What was grouting material? _____
If cement, how many sacks? 2
Location of packer(s) and screen or perforated pipe _____

WAS WELL PLUGGED OR ABANDONED ☐ Yes ☐ No
If so how and with what material? _____

Well Owner: Black Hills Education Center
Name Hermosa, S.D. Address Irrigation
Well top: _____ Depth _____

Formation	From	To
<u>red clay gravel</u>	<u>0</u>	<u>65</u>
<u>sandstone</u>	<u>65</u>	<u>90</u>
<u>gravel</u>	<u>90</u>	<u>100</u>

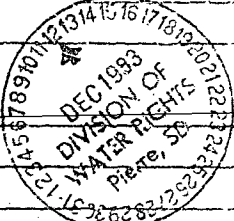
STATIC WATER LEVEL 58 Feet
If flowing: closed in pressure _____ PSI
GPM flow 120 through _____ inch pipe
Controlled by ☐ Valve ☐ Reducers ☐ Other
If other; specify _____
Can well be completely shut off? _____

WELL TEST DATA:
☒ Pumped
☐ Bailed Describe: _____
☐ Other _____

Pumping Level Below Land Surface
69 ft. After 1/2 Hrs. pumped 120 GPM
64 ft. After 1 1/2 Hrs. pumped 120 GPM
_____ ft. After _____ Hrs. pumped _____ GPM

Remarks: 15 MIN. 4 Feet Draw Down
Full Recovery

This well was drilled under license # 363
and this report is true and accurate.
Charles Howe Charles C. Howe
Drilling Firm Signed by
8/2/83 Mr. Hart
Date 12-14-83

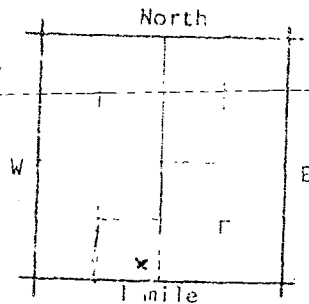


Daplex

STATE OF SOUTH DAKOTA WELL DRILLERS REPORT

Location SE 1/4 Sec 28 Twp 2 S Rg 7 E

County

Pennington
ClusterPlease mark well
location with
an "X"Well Completion Date May 5, 1983

PROPOSED USE:

☒ Domestic ☐ Municipal ☐ Test Holes
☐ Irrigation ☐ Industrial ☐ Stock

Method of Drilling:

Forward Rotary

WELL CONSTRUCTION:

Diameter of hole 6 inches Depth 77 feetCasing: ☐ Steel ☒ Plastic ☐ Other
Specify _____
 Pipe Weight Diameter From To
 _____ lb/ft _____ inches _____ feet _____ feet
 _____ lb/ft _____ inches _____ feet _____ feet
Was a well screen used? ☐ Yes ☒ No

If Not Specify _____

Screen Type _____ Slot Size _____

Length _____ Diameter _____

Was Casing left open end? ☐ Yes ☒ NoWas a Packer or seal used? ☒ Yes ☐ No

If so what material? _____

Was well gravel packed? ☐ Yes ☐ NoWas well grouted? ☒ Yes ☐ No

Describe grouting procedure _____

To what depth? 20 FeetWhat was grouting material? CementIf cement, how many sacks? 1Location of packer(s) and screen or perforated
pipe _____WAS WELL PLUGGED OR ABANDONED ☐ Yes ☒ No

If so how and with what material? _____

Well Owner:

Name Black Hill Education CenterAddress Herman, S.D. BERLIN

Well Log:

Depth

Formation

From

To

Clay dirt gravel 0 20LIME STONE - SAND STONE 20 77STATIC WATER LEVEL 40 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify _____

Can well be completely shut off? _____

WELL TEST DATA:

☐ Pumped☐ Bailed Describe: _____☐ Other _____

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

Remarks:

This well was drilled under license # 263

and this report is true and accurate.

Charles Homan
Drilling FirmCharles Homan
Signed by5/5/83
DateMr. Dent
12-14-83

Dwellings 3

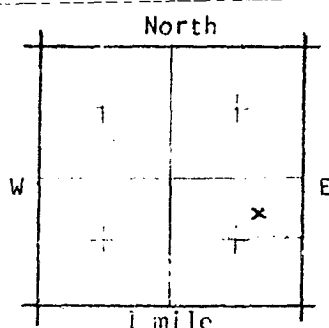
STATE OF SOUTH DAKOTA WELL DRILLERS REPORT

Location NE 1/4 SE 1/4 Sec 29 Twp 25 Rg 7 E

County

Pennington
Custer

Please mark well location with an "X"



Well Completion Date Aug. 5, 1983

PROPOSED USE:

☒ Domestic ☐ Municipal ☐ Test Holes
☐ Irrigation ☐ Industrial ☐ Stock

Method of Drilling:

Forward Rotary

WELL CONSTRUCTION:

Diameter of hole 6 inches Depth 75 feet

Casing: ☐ Steel ☒ Plastic ☐ Other
Specify _____

Pipe Weight Diameter From To
_____ lb/ft _____ inches _____ feet _____ feet
_____ lb/ft _____ inches _____ feet _____ feet

Was a well screen used? ☐ Yes ☒ No

If Not Specify _____

Screen Type _____ Slot Size _____

Length _____ Diameter _____

Was Casing left open end? ☐ Yes ☒ No

Was a Packer or seal used? ☒ Yes ☐ No

If so what material? _____

Was well gravel packed? ☐ Yes ☒ No

Was well grouted? ☒ Yes ☐ No

Describe grouting procedure _____

To what depth? 20 Feet

What was grouting material? Cement

If cement, how many sacks? 1

Location of packer(s) and screen or perforated pipe _____

WAS WELL PLUGGED OR ABANDONED ☐ Yes ☒ No

If so how and with what material? _____

Well Owner:

Name Black Hills Education Center

Address Hermosa, S.D.

Well Log:

Depth

Formation	From	To
<u>top soil</u>	<u>0</u>	<u>6"</u>
<u>Limestone</u>	<u>6"</u>	<u>37</u>
<u>Sandstone</u>	<u>37</u>	<u>60</u>
<u>Limestone</u>	<u>60</u>	<u>75</u>

STATIC WATER LEVEL _____ Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify _____

Can well be completely shut off? _____

WELL TEST DATA:

☐ Pumped

☐ Bailed Describe: _____

☐ Other _____

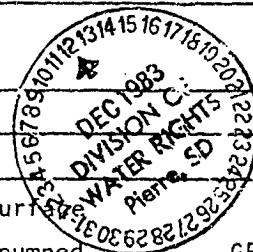
Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

Remarks:



This well was drilled under license # 363

and this report is true and accurate.

Charles Howe
Drilling Firm

Charles Howe
Signed by

8/21/83
Date

Mr. Sent
12-14-83

Downen Drilling Company

1901-2
W. Werth

Rt. 1

Hermosa, SD. 57744

Date

160' fo $6\frac{1}{2}$ " Drilling

100' of 5" casing (Steel)

No screen.

Water Level 60' from top

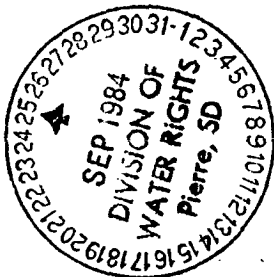
Test 30 GpM

Drilled 6/5/80

Water from the minnelusa sandstone

NE 1/4 of SE 1/4
of Sec 28
T2 R7

Warren B. Bowman



Well log submitted
02-11-1968

Well log for actual
~~well drilled. Not~~

AND OF MICROFILM WHICH MEET THE RECOMMENDED REQUIREMENTS OF THE NATIONAL BUREAU OF STANDARDS FOR FILM AND MICROFILMS.

10-71-XZ

FBI - NEW YORK

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED DATE 10-18-96 BY SP-6 JAC/jac

DECLASSIFY ON: OADR REQUEST

#1901-2

AND ON FILMS WHICH MEET THE RECOMMENDED REQUIREMENTS OF THE NATIONAL BUREAU OF STANDARDS FOR PERMANENT MICROFILM REPRODUCTIONS, SECTION 3.4.1.

REDUCTION 25:1 ROLL NO 4-3

DATE MICROFILMED

CAMERA OPERATOR

For additional

[illegible]

STATIC WATER LEVEL 8 Feet
if flowing: closed in pressure PSI
GPM flow through inch pipe
Controlled by ☐ Valve ☐ Reducers ☐ Other
if other; specify
Can well be completely shut off?

WELL TEST DATA:

☒ Pumped

☐ Bailed

☐ Other

Describe: 60 gpm @ 46 FT
80 gpm @ 67 FT

Pumping Level Below Land Surface
 67 ft. After 4 Hrs. pumped 80 GPM
 _____ ft. After _____ Hrs. pumped _____ GPM
 _____ ft. After _____ Hrs. pumped _____ GPM

marks:

Loose Sand S
at Bottom

APR 1985
DIVISION OF
WATER RIGHTS
Pierre, SD

CAMERA OPEN

is well was drilled under license # 492
and this report is true and accurate.
Leuris Drilling LC Leuris
Drilling Firm Signed by
1-3-85
ce 5-16-85

WNR-836 4/82

5-16-85

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Black Hills Health and Education Center

ADDRESS: COUNTY: Custer

DATE: July 15, 2003 TELEPHONE:

RE: Review of application

COMMENTS:

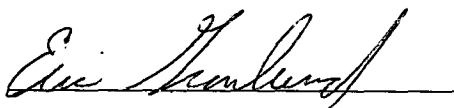
I reviewed the application submitted by Black Hills Health and Education Center and the file documentation of Don's visit to get their water right permitting issues resolved. The application proposes a total appropriation at the facility's wells of 0.33 cfs. However, there are currently two water permits from two of the wells on the property.

Permit No. 1738-2 in the name of Willard Werth appropriated 0.85 cfs to irrigate 60 acres. This well still exists and is used by the center for irrigation and institutional uses. The production of this well is approximately 0.09 cfs (40 gpm). I propose that the Center transfer ownership of this water permit to their name and it be licensed for 0.09 cfs for irrigation. This use of water under this permit can not be changed to institutional because of the constraints of SDCL 46-5-34.1.

Water Permit No. 1968-2 can be licensed for 0.04 cfs for one well and ultimately incorporated into the water license when the pending application is licensed (assuming it is approved).

The 0.09 cfs and 0.04 cfs held under these existing permits can be deducted off the 0.33 cfs requested in the pending application. This means the pending application proposes to appropriate 0.20 cfs (90 gpm) from the wells used at the facility. This application also includes a new well to be drilled.

NAME:



Permits No. 1738-2 & 1968-2
Custer County

To: Chief Engineer, Water Rights Program, DENR Foss Bldg., Pierre, SD 57501
Other permit/license(s) associated with project: **Permit No.1901-2, Williard Werth**
Contact Person & Address: **Art Garner, Black Hills Health & Education Center**

Report Of Examination of Works

On **June 17, 2003** I revisited the **Black Hills Health & Education Center (BHHEC)** after their reorganization concerning the following water rights:

Permit No. 1738-2 - 0.85 cubic feet per second (cfs) of water from a **320-foot** deep well in the NW¼ SE¼ Section 28 T2S R7E for **irrigation use**.

Permit No. 1968-2 - 0.04 cfs of water from a **230-foot** deep well in the NW¼ SW¼ Section 28 T2S R7E for **institutional use**.

The BHHEC has sold or is in the process of selling two of the staff dwelling sites labeled Dwellings 2 and 3 on Attachment 1. The wells associated with these properties will now be in private ownership and used for domestic purposes.

The following wells from the Minnelusa Formation are presently in use at the institution as shown on Attachment 2, all T2S R7E:

- Wellness-Fitness Center (Permit No. 1968-2) – 215-foot deep, rated at 15 gpm (0.03 cfs) in the NW¼ SW¼ Section 28 (W103.2990 N43.8467), 93-feet East 2692-feet South of the NW Corner Section 28.
- Irrigation Well (Permit No. 1738-2) – 100-foot deep, rated at 120 gpm (0.27 cfs) in the SE¼ SW¼ Section 28 (W103.2920 N43.8413), 1950-feet East 640-feet North of the SW Corner Section 28.
- Institution Staff Dwelling (Duplex) – 77-foot deep, estimated rate of 0.03 cfs, in the SE¼ SW¼ Section 28 (W103.2937 N43.8423), 1434-feet East 940-feet North of the SW Corner Section 28.
- Main Lodge, Upper Lodge & New Building – 200-foot deep, estimated rate of 0.03 cfs, in the SE¼ SW¼ Section 28 (W103.2940 N43.8470), 1424-feet East 2641-feet South of the NW Corner Section 28.
- Institution Staff Dwelling – 75-foot deep, estimated rate of 0.03 cfs, in the NE¼ SE¼ Section 29 (W103.3030 N43.8458), 712-feet West 2250-feet North of the SE Corner Section 29.

None of these wells are good producers, especially the one used for irrigation rated at 0.27 cfs on the well log. The institution cannot pump this well at this rate and is in the process of decreasing the pump size presently in use on the well by two-thirds. This well probably will produce at a rate of 0.09 cfs. As during

the previous visit to BHHEC, no one presently on the staff is sure of the pump sizes installed in the wells or the actual producing rate per well.

In the future the BHHEC plans to re-work the old well by the Main Lodge for use in irrigating garden plots. BHHEC also plans to drill a new well for use at planned staff dwellings. The institution will submit new applications for these projects.

COMMENTS:

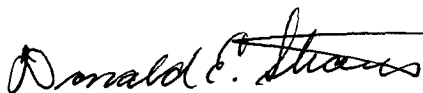
The 215-foot well at the Wellness-Fitness Center (No. 1968-2) should be licensed at the rate of 0.03 cfs for Institutional use.

The 100-foot well used for irrigation (No. 1738-2) should be licensed at the rate of 0.09 cfs and the use changed to Institutional.

The other three wells in use at the BHHEC need to be permitted for Institutional use. These wells are from the same source, the Minnelusa Formation, and can be combined on one application.

The planned well and the old well by the Main Lodge should be added to the inventory for BHHEC.

All of this could be accomplished by an amending application from BHHEC as all the wells are or will be from the same source, the Minnelusa Formation, and for the same purpose. A letter and amending application form has been sent to the Center.



Donald E. Stroup
Natural Resources Project Engineer
DENR Water Rights Program

WATER PERMIT APPLICATION NO. 2511-2
BLACK HILLS HEALTH AND EDUCATION CENTER
-----AUGUST 21, 2003-----

Water Permit No. 2511-2 proposes to appropriate 0.20 cubic feet of water per second (90 gallons per minute) from five wells (four existing wells and one proposed), 75-200 feet deep (Minnelusa aquifer), located in the NE¼ SE¼ Sec. 29; N½ SW¼, SE¼SW¼ Sec. 28; all in T2S-R7E. The water is for institutional use at the Center. The Center holds Water Right No. 1738-2 and 1968-2 for two other wells located on the facility's property.

AQUIFER: Minnelusa aquifer (MNLS)

This application is the result of a licensing inspection of Water Permit Nos. 1738-2 and 1968-2 conducted by Donald Stroup. At the time of the inspection five wells were in use at the institution for irrigation and institutional use. This application proposes to appropriate additional water to reflect actual use by the facility.

Minnelusa aquifer

A review of the areal geology (Strobel and others, 1999) identifies the ground surface at all of the well sites as either the Minnelusa Formation or alluvium. The thickness of the Minnelusa is estimated to range from 130 feet at the western most well site to around 500 feet at the eastern wells (Carter and Redden, 1999).

General Information:

The Minnelusa Formation consists of alternating beds of sandstone and dolomitic limestone with lesser amounts of shale and chert. The formation underlies virtually all of western South Dakota. The porous portions of the formation make up the Minnelusa aquifer and contain over 755 million acre-feet of recoverable water in storage (Allen, and others, 1984). Just as the lithology of the formation is quite variable, so is the porosity of the Minnelusa Formation. Well sorted sand lenses have porosities approaching 25%, but generally the sands have porosities of 10%. The average porosity of the Minnelusa is estimated to be 10% and the effective porosity is assumed to be 5% (Rahn, 1979). Water in the aquifer generally moves from west to east in this area (Strobel and others, 2000). The water quality of the aquifer is generally good near the outcrop but deteriorates considerably with distance from the recharge area. The aquifer is under unconfined conditions in this area.

Water Availability:

The availability of unappropriated water from an aquifer can be evaluated by considering SDCL 46-6-3.1. This statute requires that an application to appropriate groundwater can not 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 average estimated annual recharge.

Recharge to the Minnelusa aquifer is primarily from infiltration of precipitation on the outcrop and stream flow losses. Average annual recharge to the aquifer from 1931-1998 is estimated to be approximately 112,000 acre-feet per year (Carter and others, 2001).

There are a total of 187 appropriations from the Minnelusa aquifer in South Dakota, including two Future Use Reservations. The aquifer is used primarily for domestic, commercial, municipal, suburban housing and irrigation uses. The Future Use Permits (No. 902-1 and 969-1) reserve 1,460 acre-feet annually. Water Permits and Rights represent appropriations up to 10,802.7 acre-feet annually for irrigation use (Water Rights, 2002) and a combined diversion rate of 29.68 cfs for non-irrigation uses. Maximum well withdrawals from the Minnelusa aquifer, assuming (1) that permits/rights with an annual withdrawal limitation (ac-ft/yr.) will use the maximum allowable; and (2) permits/rights that are limited by a diversion rate only, will use 60% of the maximum allowable (considered reasonable for water distribution systems); would be approximately 24,000 acre-feet per year. The maximum potential withdrawal from the Minnelusa aquifer at the current level of appropriation is less than 22% of than average annual recharge estimated for the aquifer. The actual amount of water used from the aquifer is considerably less than this estimate. Withdrawals from wells (domestic and appropriative) completed into the Minnelusa aquifer were estimated to be 8,108 acre-feet annually from 1987-1996 (Carter and others, 2001).

Therefore, based on a simple water budget, it is clear that unappropriated water is available for this appropriation.

Observation well information also confirms that unappropriated water is available from the aquifer. The Water Rights Program monitors 23 observation wells completed into the Minnelusa aquifer in the Black Hills area. Minnelusa aquifer observation well CU-83A is located approximately one and one-half miles east of the wells to be used to supply this permit. The hydrograph for the observation well is shown in figure 1.

**WATER RIGHTS' OBSERVATION WELL
CU-83A**

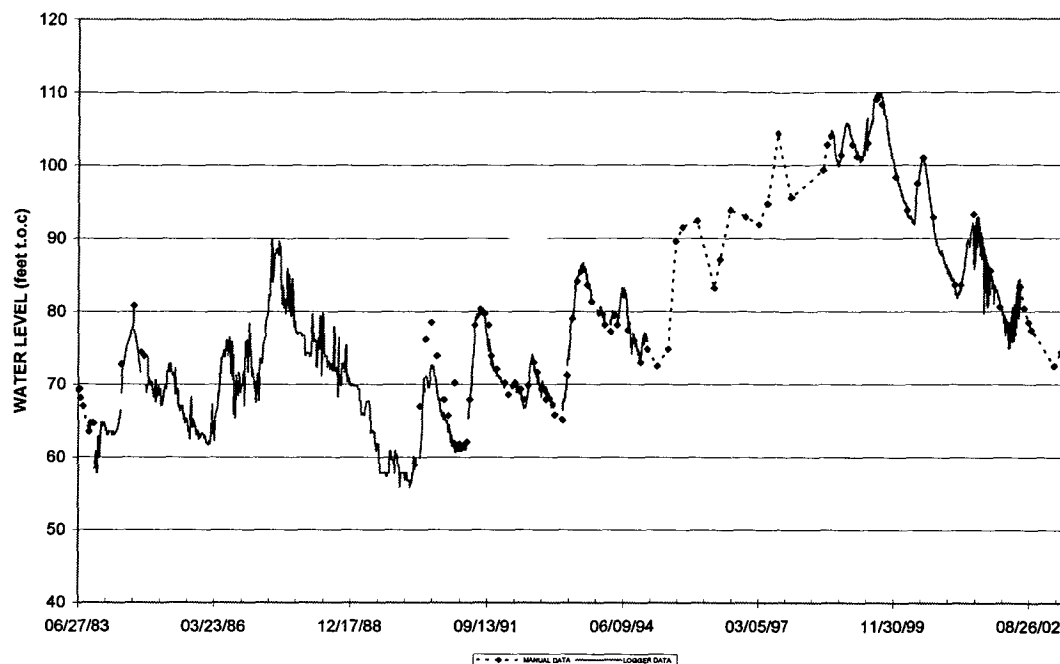


Figure 1. Water Rights' Minnelusa aquifer Observation well, two and one-half miles south of 2498-2

The hydrograph clearly shows the Minnelusa aquifer's response to recharge and climatic conditions. It also illustrates the magnitude of fluctuation of the water level of the Minnelusa aquifer in this area, over 50 feet in the confined portion of the aquifer, although the water level fluctuation is expected to be less. Observation well data suggests that at the existing level of development, natural influences dominate the water level of the aquifer and the effects of pumping as yet are not obvious. Therefore, it is apparent that the aquifer is capable of sustaining additional withdrawals (Water Rights, 2003b).

Affects on Existing Rights:

There are three Water Permits/Rights appropriating groundwater within approximately two miles of Black Hills Health and Education Center, (Water Rights, 2003c) see table 1.

PERMIT NO.	NAME	AQUIFER	USE	CFS
1677-2	LYNN HEDGES & ASSAD BARARI	MNLS	IRR	0.28
1901-2	WILLARD WERTH	MNLS	IRR	0.28
2377-2	RUSHMORE RANCH ESTATES	MDSN	COM	0.33

Table 1. Groundwater appropriations within two miles of 2511-2

The Black Hills Health and Education Center is located near the western extent of where the Minnelusa aquifer can be considered a viable aquifer. In general, wells in this immediate area and to the west of this site are completed into the Madison, Deadwood or Precambrian

aquifers. There are a number of domestic wells on file with the Water Rights Program for this area (Water Rights, 2003a).

Wells that are not supplied by the Minnelusa aquifer should not be affected by withdrawals from the Black Hills Health and Education Center's wells since the Opeche Shale serves as a confining layer above the Minnelusa, and the thick carbonate sequence in the lower Minnelusa isolates the Minnelusa aquifer from lower aquifers.

The distance between the Black Hills Health and Education Center's wells and other appropriations from the Minnelusa aquifer, and the relatively low combined pump rate (90 gpm) should be sufficient to negate interference between wells. The Minnelusa is under unconfined conditions at the Center's wells but the aquifer is confined within less than one mile.

Confined Conditions:

Where the Minnelusa is under confined "artesian" conditions, the potentiometric surface fluctuates fairly significantly (see figure 1). Drawdown from a pumped well may extend over a large area in an artesian aquifer. However, Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1, provide for the regulation of large capacity wells without the necessity of requiring the maintenance of artesian head pressure. Simply put, well interference that results in lower water levels in existing wells is not necessarily an adverse impact. Lower water levels may obligate nearby well owners to set the pumps lower in their wells. If this were 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. Therefore, the impact on area water rights/permits and domestic wells should not be significant.

Unconfined conditions:

The Minnelusa is under unconfined, "water table" conditions in the immediate vicinity of the Black Hills Health and Education Center. ARSD 74:02:04:20(6) defines an adequate well as a well constructed to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer. An adversely impacted domestic well is defined by 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 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.

It is possible that a pump setting of 20 feet below the top of the Minnelusa aquifer, where the aquifer is unconfined, is not enough to deliver sufficient water for a well owner's needs although the well is technically and "Adequate Well". Under these circumstances it can be argued that, any measurable interference (drawdown), from a competing well is actually an adverse impact. However, considering the natural water level fluctuations, even in the unconfined portions of this aquifer, well interference of a few feet could be considered insignificant.

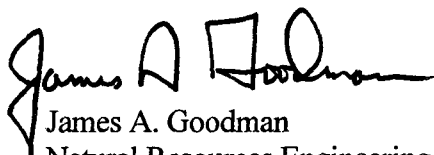
Conclusions:

1. The Minnelusa Formation is a viable aquifer in this area.

2. The diversion proposed by this application will not adversely impair existing water rights.



Ken Buhler
Natural Resources Engineering Specialist
Approved by



James A. Goodman
Natural Resources Engineering Director

References:

- Allen, J.C., Iles, D.L., and Petres, A.K., 1984, Analysis of Groundwater and Streamflow Data Western Dakotas Region of South Dakota, Task 3 and 4: Groundwater Resource Inventory: South Dakota Department of Water and Natural Resources,
- Carter, J.M., and Redden J.A., 1999a, Altitude of the Top of the Minnelusa Formation in the Black Hills Area, South Dakota: U.S. Geological Survey: Hydrologic Investigations Atlas HA-744-C, 2 sheets, scale 1:100,000
- Carter, J.M., and Redden J.A., 1999b, Altitude of the Top of the Madison Limestone in the Black Hills Area, South Dakota: U.S. Geological Survey: Hydrologic Investigations Atlas HA-744-D, 2 sheets, scale 1:100,000
- Carter, J.M., Driscoll, D.G., Hamade, G.R., and Jarrell, G.J., 2001, Hydrologic Budgets for the Madison and Minnelusa Aquifers, Black Hills of South Dakota and Wyoming, Water Years 1987-96: U.S. Geological Survey Water-Resources Investigations Report 01-4119, 53 p.
- Carter, J.M., Driscoll, D.G., and Hamade, G.R., 2001, Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years, 1931-98: U.S. Geological Survey Water Resources Investigations Report 00-4278, 66 p.
- Rahn, P.H., 1979, Ground Water Resources of Western South Dakota: South Dakota School of Mines and Technology Project No. 2533,
- Strobel, M.L., Jarrell, G.J., Sawyer, J.F., Schleicher, J.R., Fahrenbach, M.D., 1999, Distribution of Hydrogeologic Units in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-743, 3 sheets, scale 1:100,000

Strobel, M.L., Galloway, J.M., Hamade, G.R., and Jarrell, 2000, Potentiometric Surface of the Minnelusa Aquifer in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-745-C; 2 sheets, scale 1:100,000

Water Rights, 2002, Irrigation Summary by Aquifer: South Dakota DENR-Water Rights Program

Water Rights Program, 2003a, "Domestic Well Log Files", South Dakota DENR-Water Rights Program,

Water Rights Program, 2003b, "Unpublished Observation Well Records", South Dakota DENR-Water Rights Program,

Water Rights Program, 2003c, "Water Permit/Right Files", South Dakota DENR-Water Rights Program,



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2511-2, Black Hills Health and Education Center**

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. 2511-2, Black Hills Health and Education Center, c/o Arthur Garner, PO Box 7, Hermosa SD 57744.

The Chief Engineer is recommending APPROVAL of Application No. 2511-2 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 qualification:

The wells approved under this Permit 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.

See report on application for additional information.

Garland Erbele, Chief Engineer
August 26, 2003



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

www.state.sd.us/denr

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

August 27, 2003

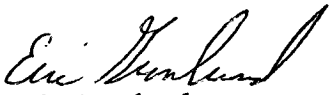
Black Hills Health & Education Center
% Arthur Garner
PO Box 19
Hermosa SD 57744

Dear Mr. Garner:

Water Permit Application No. 2511-2 for institutional use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Custer Co. Chronicle printed at Custer, SD (Ph # 605-673-2217). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. 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.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

August 27, 2003

Custer Co Chronicle
PO Box 551
Custer SD 57730-0551

ATTENTION: Legal Public Notice

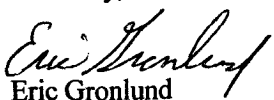
Enclosed is a Notice of Hearing on Application No. 2511-2 to Appropriate Water to be published twice. Please publish the first notice on September 3, 2003 with the second publication 7 days later.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Black Hills Health & Education Center, % Arther Garner, PO Box 19, Hermosa SD (Ph # 605-255-4101).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

No. 2511-2

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of August 27, 2003 enclosing Notice of Hearing to Appropriate Water by Application No. 2511-2 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on September 3, 2003 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2511-2 to Appropriate Water

Notice is given that the Black Hills Health and Education Center, PO Box 19, Hermosa SD 57744 has filed an application for a water permit to appropriate 0.20 cubic feet of water per second (90 gallons per minute) from 5 wells (4 existing) 75-200 feet deep (Minnelusa Aquifer) located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 29; N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 28; all in T2S-R7E. The water is for institutional use at the center. The Center holds Water Right Nos. 1738-2 and 1968-2 for two other wells located on the facility's property.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2511-2 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. 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 the application. Notice of the hearing will be given to the applicant and any person filing a petition.

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 September 22, 2003.

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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Affidavit of Publication

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

Black Hills Health & Education

Notice of Application #
2511-2

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 2 successive week(s), on which said newspaper was regularly published, to wit:

Sept. 2, 2003; Sept. 10, 2003;

_____;

_____;

_____;

_____;

the full amount of the fees for the publication of the annexed notice is \$ 39.13.

Charles W. Najacht

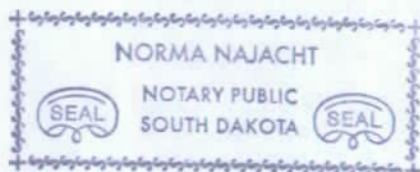
Subscribed and sworn to me before this 10

of September, 20 03;

Norma Najacht

NOTARY PUBLIC

MY COMMISSION EXPIRES: May 5, 2006



NOTICE OF APPLICATION NO. 2511-2

TO APPROPRIATE WATER

Notice is given that the Black Hills Health and Education Center, PO Box 19, Hermosa SD 57744 has filed an application for a water permit to appropriate 0.20 cubic feet of water per second (90 gallons per minute) from 5 wells (4 existing) 75-200 feet deep (Minnelusa Aquifer) located in the NE 1/4 SE 1/4 Section 29; N 1/2 SW 1/4, SE 1/4 SW 1/4 Section 28; all in T2S-R7E. The water is for institutional use at the center. The Center holds Water Right Nos. 1738-2 and 1968-2 for two other wells located on the facility's property.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2511-2 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. 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 the application. Notice of the hearing will be given to the applicant and any person filing a petition.

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 September 22, 2003.

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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

#293, 9/3, 9/10

RECEIVED

SEP 12 2003

WATER RIGHTS PROGRAM



OCT 10 2003

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

Black Hills Health and Education Center
% Arthur Garner
PO Box 19
Hermosa SD 57744

Dear Mr. Garner:

Enclosed is Water Permit No. 2511-2 authorizing construction of your 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,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

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

Date October 31, 03

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

FROM: Black Hills Health and Education Center
(name)
P.O. Box 19
(address)
Hermosa S.D. 57744 (city, state, zip) _____ (phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 2511-2 states that the water use system is to be constructed by Sept 22 2008, and water is to be put to beneficial use by 9-22-12.
(date) (date)

The water use system was completed on 9-19-03 approximately.
(date)

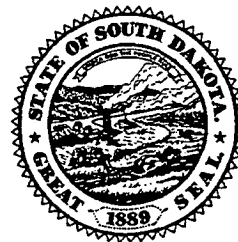
Applying the water to beneficial use was completed on Pump will be placed in spring 04
(date)

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

Arthur Garner (Manager)
(signature)

7-98

RECEIVED
NOV - 4 2003
WATER RIGHTS
PROGRAM



**Water Rights Program - DENR
Conversation File Documentation
Permit # 2511-2**

NAME OF PERSON OR FILE: Black Hills Health and Education Center

PHYSICAL ADDRESS: 13815 Battle Creek Rd, Hermosa, SD

MAILING ADDRESS: % Rich Smith, Director, P.O. Box 19, Hermosa, SD 57744

COUNTY: Custer County

DATE: January 20, 2016 **TELEPHONE:** (605) 255-4101

RE: Licensing of Water Permit No. 2511-2

COMMENTS: I made a site visit on January 20 to Black Hills Health and Education Center and met with Rich Smith, director. Smith has been with the Center since January of 2015 and is familiar with most of the current facilities but has limited knowledge of past details concerning wells and pumps. We toured the entire campus and located and documented most of the wells located on property currently and previously owned by BHHEC. All references to well numbers in this file correspond with well numbers designated by Donald Stroup in his inspection report of June 13, 2002. After meeting with Smith, I contacted Willard Werth who had been associated with BHHEC for many years and was referred to me by Smith as being a source for the best historical knowledge. A considerable amount of land formerly owned by BHHEC has been sold off over the years to private individuals for single family housing and some wells formerly owned by the Center were involved in these transfers. All of the wells included in this report serve separate and distinct systems and are not interconnected in any way. Information gathered from Smith and Werth affects permits #2511-2, #1738-2, #1968-2, and #1901-2 and is as follows:

Well # 1 This well location was mistakenly identified for license #1738-2 but was later corrected. (see #6)

Well # 3 – Donald Wojciechowski license # 1901-2 for irrigation. More information concerning this well is included in the conversational file submitted for 1901-2.

Well # 4 – The exact location of this well is not known but it is not on property owned by BHHEC and is most likely domestic use. (could be well on property owned by Gregory Barbeauld)

Well # 5 - This well is still technically controlled by BHHEC but is on one of four lots which were formed when BHHEC property was subdivided. Three lots have been developed and when the fourth is sold the well will be turned over to the home owners association and is domestic use only.

Well # 9 - is now owned jointly by Mark Boddicker, 13850 Battle Creek Rd. and Betty Feddersen, 13852 Battle Creek Rd.. The well is located right on the lot line. The well is currently domestic use serving these two houses. Neither owner knows anything about the well pump or capacity except that Boddicker thinks it is a commercial size pump with good capacity. This well is most likely producing less than 18 gpm with the current connections.

Wells #2, 6, 7, 8 & 10 and the new well **constructed in 2003** remain on BHHEC property.

#2: BHHEC permit # 1968-2 for institutional use (.03 cfs), serving the Wellness Center and **is to be incorporated into #2511-2 when licensed.** The wellness center has 13 rooms and can house up to 24 people rotating in and out for up to 18 days per stay.

#6: - BHHEC license # 1738-2 for Irrigation use (.09 cfs). (proper location and legal description corrected in 2004)

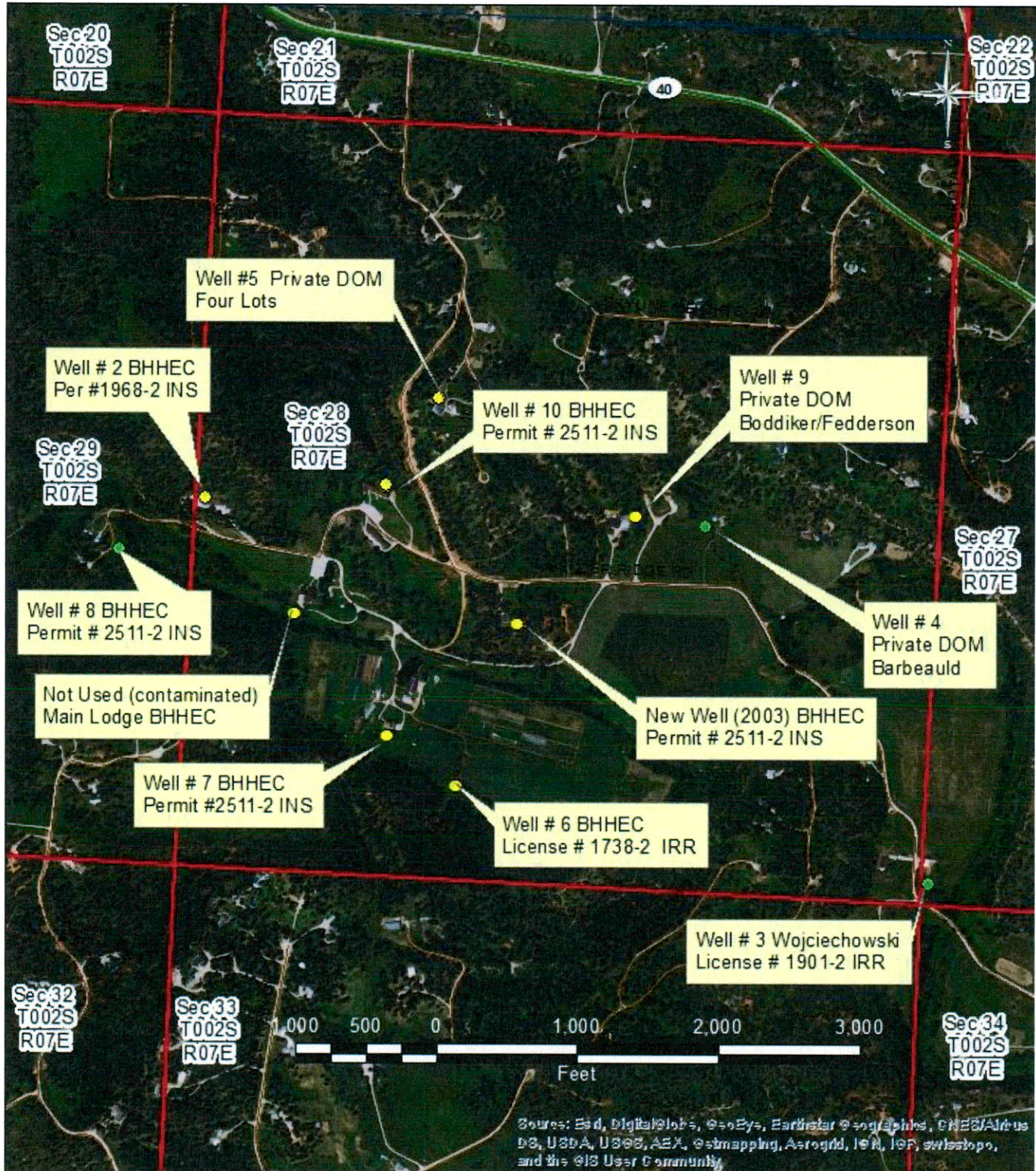
#7: BHHEC Permit #2511-2 for Irrigation use. This is a good well used for a duplex housing unit, a green house and irrigation. This most likely the 100 ft. irrigation well recommended by Stroup to be licensed for .09 cfs but with map location #6. **Include in license #2511-2.**

#8: This property location was identified by Stroup as in the process of being sold in 2002, but it is still owned by BHHEC and the well serves two residences used for staff housing. The gps coordinates were not correct on the 2002 report. Nothing is known about the well capacity except that it is apparently adequate for domestic use for the two residences. **Include in license #2511-2.** Estimated capacity .02 cfs.

#10: BHHEC permit #2511-2 for institutional use (.04 cfs per Stroup report showing 18 gpm for small dormitory). This well serves Red Canyon Lodge housing short-term guests up to a max of 12 people; Pine lodge housing 7; and the Main Lodge with offices, cafeteria and meeting space. **Include in license #2511-2).** The original well which served the Main Lodge was abandoned years ago due to contamination and has not been plugged. Contamination results each time Battle Creek floods out of its banks.

New well: BHHEC permit #2511-2. This well was drilled in 2003 per a Notice of Completion of Works filed 10/31/03 by Art Garner. A well log is not in the current .pdf file for 2511-2. The well was drilled by Taylor Drilling and a well log was filed but under Art Garner's name as owner. Garner was director of the Center at that time and the log should have shown BHHEC as owner. The log under Garner's name which is in DENR's well data base needs to be added to the pdf file for 2511-2. The well serves the residence for the Center director and a residence used for staff housing.

Conversational File
1/20/2016



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 2511-2

I have this day, January 20, 2016, made a thorough examination of the water use system constructed by Black Hills Health & Education Center, 13815 Battle Creek Rd, Hermosa SD of Permit No. #2511-2, bearing the priority of 7/15/2003 authorizing the diversion of 0.20 cu. ft. per second of the water from 5 wells for institutional use purposes, in Custer County.

Inspection contact & relationship
to permit holder, if applicable:

Rich Smith, Director,
Black Hills Health & Education Center
P.O. Box 19, Hermosa, SD 57744
605-255-4101

and

Willard Werth, board member

A. Works used to divert the water:

Well Information: This permit included four wells in existence at the time of permit application. Only the 2003 well drilled after the application is included in the following text. All other well data included in summary table below.

- 1) Well Drilling Firm: Taylor
- 2) No. of Wells 1
- 3) Depth(s) 374 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 5 ½ and 4 ½ inches
- 2) Length 374 feet
- 3) Type Steel

Screen:

- 1) Type torch cut slots
- 2) Length 258-269, 293-294, 300-310, 341-344 foot depths
- 3) Static water level 130 feet

Pump:

- 1) Make Grundfos Model 10S15-21 Size 4"
- 2) Capacity 12 gpm Horsepower 1 ½

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

- 1) Type Plastic pipe
- 2) Size -- inches
- 3) Length -- feet

C. Works used to apply water to beneficial use:

Plastic pipe serving two staff residences

Summary of Black Hills Health and Education Center Wells								
Well Map #	Permit #	Driller & Date	Location	Lat/Lon	Depth (ft)	Capacity cfs	Purpose	Remarks
2	1968-2/2511-2	* Howe 10/13/85	NW1/4 SW1/4 S28	N 43.847142 W 103.294183	* 215	* 0.04	INS	Well is permitted under 1968-2 and is to be incorporated into License 2511-2 per Gronlund 7/15/03
6	Lic 1738-2	* Downen Unknown	SE1/4 SW1/4 S28	N 43.841393 W 103.291868	* 320	* 0.09	IRR	The legal description was corrected in documents filed in 2004. Not included in 2511-2
7	2511-2	* Howe 7/29/83	SE1/4 SW1/4 S28	N 43.842288 W 103.293776	* 100	* 0.09	INS	Shown as well #6 in Stroup report
8	2511-2	* Howe 5/5/83	NE1/4 SE1/4 S29	N 43.84530 W 103.30150	* 75	0.02 est.	INS	Capacity estimated, no information other than well is apparently adequate for two staff residences
10	2511-2	unknown	SE1/4 NW1/4 S28	N 43.847110 W 103.294185	* 200	* 0.04	INS	Well serves Red Canyon Lodge, Pine Lodge and Main Lodge
New Well (2003)	2511-2	Taylor Drilling 9/24/03	NE1/4 SW1/4 S28	N 43.844583 W 103.290462	374	0.03	INS	The well log is in DENR's well data base with owner listed as Art Garner rather than BHHEC. Garner was director of the center in 2003.

0.18 cfs Total of 3 existing wells and the 2003 (new) well
0.04 cfs permitted under 1968-2 to be included in 2511-2
0.09 cfs licensed under 1738-2
0.31 cfs total facility appropriation

* Per Stroup Examination of Works report of 6/13/2002

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Exceptions to compliance are: **The well behind the main lodge which is not being used due to contamination has not been filled in accordance with state statutes. Stroup noted in 2003 report this needed to be filled.**

E. Condition and Location:

1. The system is in good condition with the points of diversion shown in the summary table above and map included below.
2. The works are capable of diverting and conveying to the place of use .22 cu. ft. per second (100 gpm) of water which is to be used for **institutional use** and the license should be issued for **.22 cfs**.
3. All structures, wells and lands on map – **Yes**

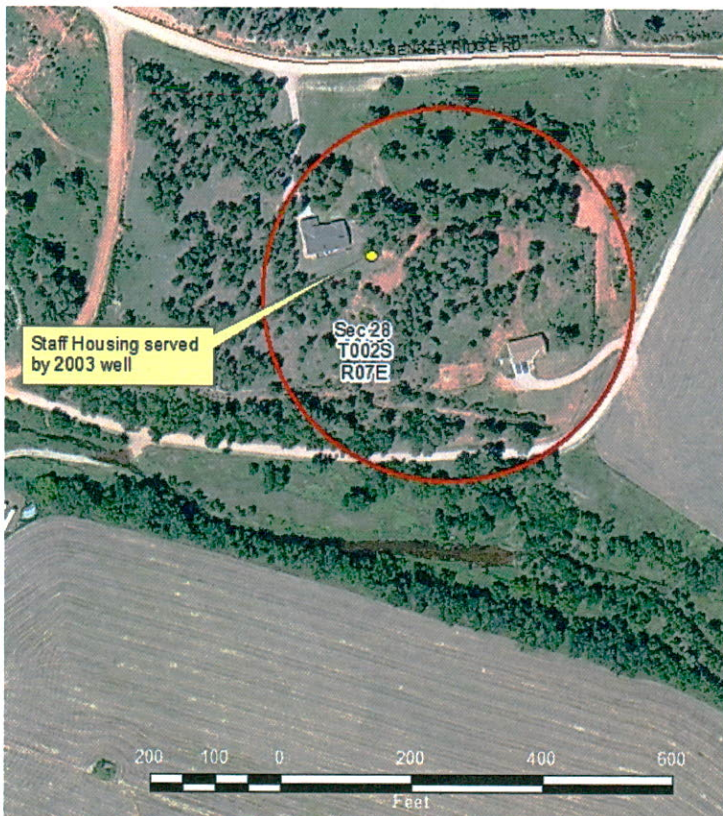
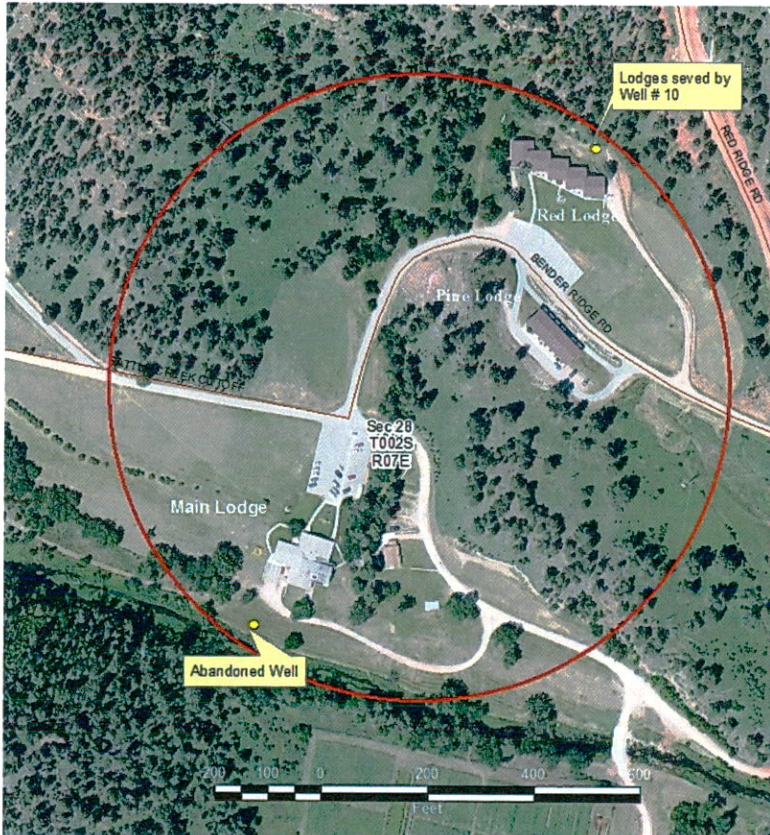
F. Comments or other permit(s) associated with the project:

Total facility appropriation is 0.31 cfs which includes license #1738-2 (.09 cfs), permit 1968-2 (.04 cfs) which is to be included in the license for #2511-2, and 3 existing wells and 2003 well permitted under #2511-2.



Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: 1/25/2016





BHHEC well #2



BHHEC well # 6



BHHEC well # 7



BHHEC new well (2003)



BHHEC well #10



BHHEC abandoned well (Main Lodge)

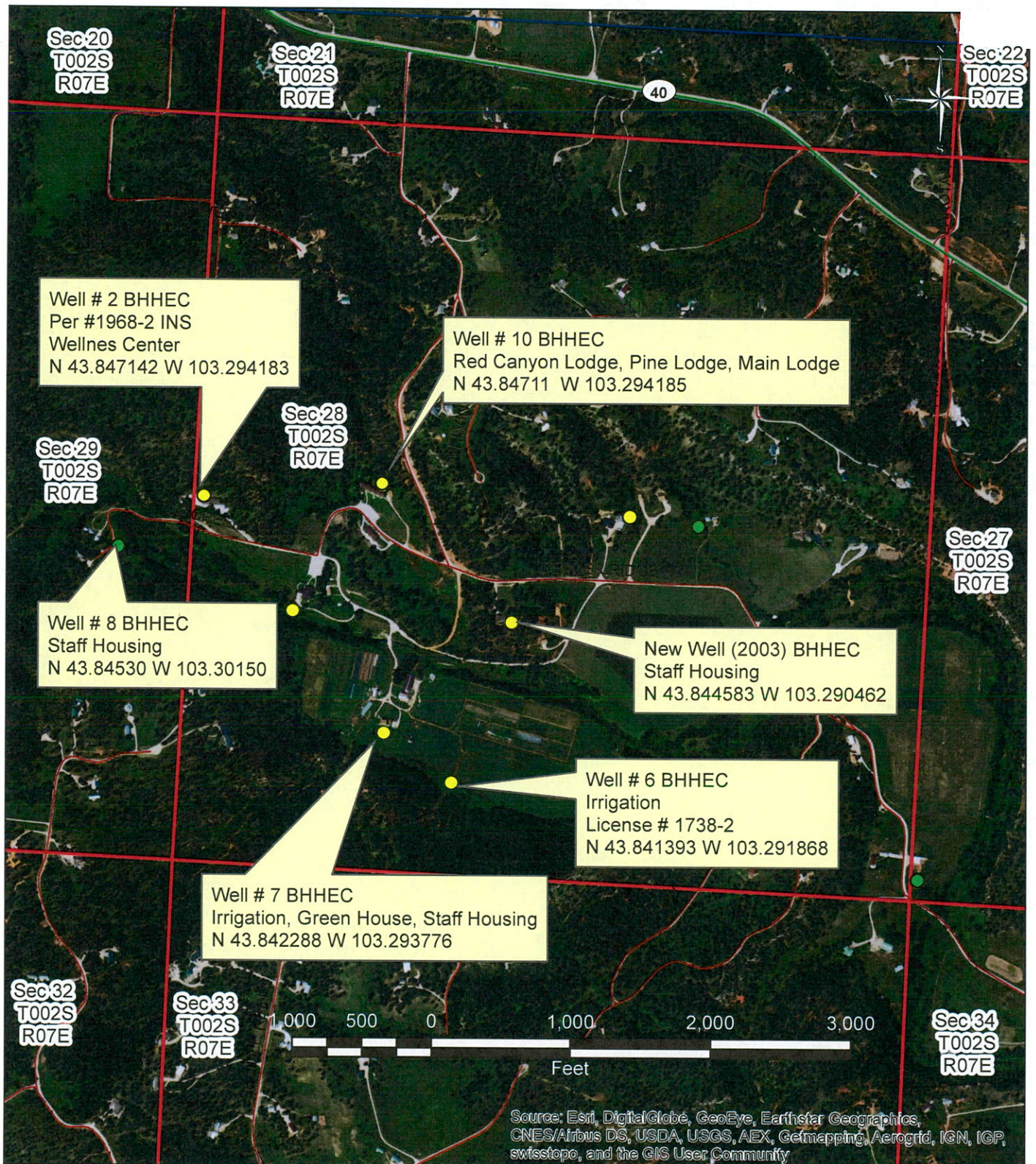


Private well DOM #9



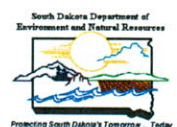
BHHEC well # 8

Water Right #2511-2
Black Hills Health & Education Center
1/20/2016



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

2511-2

MAY 02 2016

Black Hills Health & Education Center
PO Box 19
Hermosa SD 57744

Dear Sir:

Enclosed is Water License No. 2511-2. This is the final water right document completing your process of obtaining a Water Right. Also, included with your license is a map prepared by the staff engineer who conducted the investigation.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

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

Note: The applicable portions of No. 1968-2 are incorporated into Water License No. 2511-2.

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2511-2

(1) Black Hills Health and Education Center, PO Box 19, Hermosa SD 57744 made Application No. 2511-2, July 15, 2003 for a water permit to divert 0.20 cubic feet of water per second (cfs) from 5 wells – Minnelusa Aquifer, Custer County, South Dakota for institutional use purposes. Permit No. 2511-2, with a priority date of July 15, 2003 was approved September 22, 2003 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 22, 2008 and for the application to beneficial use of water on or before September 22, 2012.

Water Permit No. 1968-2, with a priority date of May 2, 1986 authorizes 0.04 cfs from one well. The applicable portions of No. 1968-2 are incorporated into No. 2511-2.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Incorporated Water Right No. 2511-2 is issued a license, bearing priority dates of May 2, 1986 (0.04 cfs) and July 15, 2003 (0.18 cfs) to appropriate 0.22 cubic feet of water per second from 5 wells – Minnelusa Aquifer for institutional use purposes.

The diversion points are located: Well # 2 - NW 1/4 SW 1/4 Section 28; Well # 7 – SE 1/4 SW 1/4 Section 28; Well # 8 – NE 1/4 SE 1/4 Section 29; Well # 10 – SE 1/4 NW 1/4 Section 28 and New Well (2003) – NE 1/4 SW 1/4 Section 28; all in T2S-R7E.

Well # 2 has a May 2, 1986 priority date and Well # 7, Well # 8, Well # 10 and New Well (2003) have a July 15, 2003 priority date.

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Permit No. 2511-2 including the following qualification:

- The wells approved under this Permit 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.



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

MAY 02 2016

date

