

WATER PERMIT NO. 2767-2

Name of Applicant: Sheri Spurlock

Address: 4004 Tiffany Sq, Alpharetta GA 30009

Phone: 770 309-7335

Amount of Water Claimed: 0.055 cfs

Total Acres: NA

Source of Water Supply: groundwater (2 wells)

Water to be used for: commercial

County: Custer

Type of Waste Disposal System:

Location: 6 miles northwest of Custer

PRIORITY

Date Received: 6-26-17

Application/License Fee: \$ 300

Corrected Application Received: 7-5-17

Period of Annual Use: April – October 31

Remarks:

Diversion Point: SW 1/4 SW 1/4 Sec 1-T3S-R3E

Land to be Irrigated: NA

Depth of Well: 500 feet

Well Driller:

Remarks:

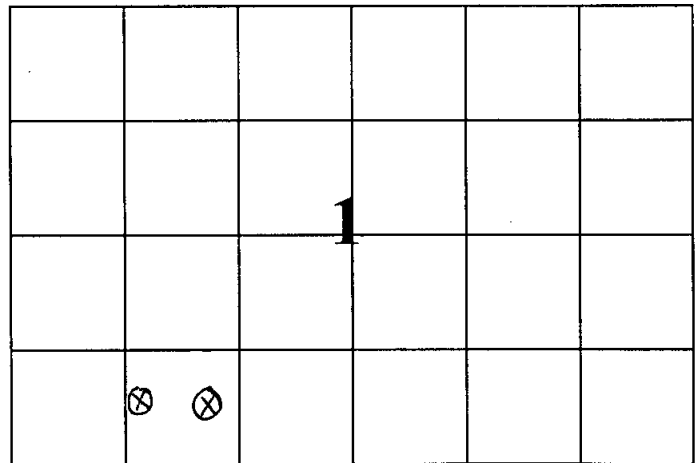
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 7-6-17

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



(type or print)

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	(office use only)	
	No. <u>2767-2</u>	Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>	
	Newspaper <u>Custer Co. Chronicle</u> <u>Rapid City Journal</u>	

RECEIVED

JUN 26 2017

WATER RIGHTS
PROGRAM

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:
(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 of Applicant Sheri Spuelock Phone 770 309-7335
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 4004 Tiffany St Alpharetta GA 30009
(Address) (City) (State) (Zip Code)
- Amount of water claimed 0.055 *CFS or 2.5 **GPM 3.8 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Water Well
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Custer
2 wells in NW1/4 SW1/4 Sec 1 T36 R3E
- County or counties where water will be used Custer
- Annual period during which water is to be used April - October Year Round domestic
- 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)
Horse + RV Campground - Phase I 25-30 campsites w/ full hookups
Phase II 10-20 additional full hook up sites 6 or so small cabins + 10 or so
primitive campsites. Bathhouse w/ 4 showers, vanities, toilets

STATE OF SOUTH DAKOTA)

County of CUSTER) SS

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)

I, Sheri Spuelock, 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 Sheri SpuelockSubscribed and sworn to before me this 22 day of June 2017

SOUTH DAKOTA
WATER PERMIT NO. 2767-2

Date of first receipt of application June 26, 2017.

Date of return to applicant for corrections, amendments or changes June 26, 2017.

Date of receipt of corrected application July 5, 2017.

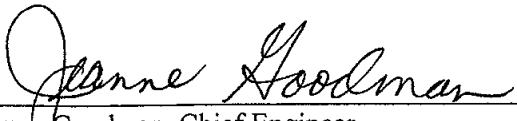
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2767-2 to Sheri Spurlock, 4004 Tiffany Sq, Alpharetta GA 30009 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2767-2 appropriates 3.8 acre feet of water annually at a maximum diversion rate of 0.055 cubic feet of water per second (25 gallons per minute) from two wells to be completed into the Crystalline Rock (approximately 500 feet deep) located in the SW 1/4 SW 1/4 Section 1 for domestic and commercial use at a horse and RV campground located in the SW 1/4 SW 1/4 Section 1; all in T3S-R3E which is approximately 6 miles northwest of Custer SD.
2. The water appropriated shall be used for the purpose of domestic and commercial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 2767-2 is September 18, 2017.
5. The date from which applicant may claim right is June 26, 2017.
6. One-fifth of the construction is to be completed on or before March 18, 2020.
7. All construction is to be completed on or before September 18, 2022.
8. Water is to be put to beneficial use on or before September 18, 2026.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

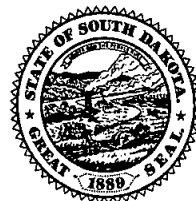
1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 2767-2 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock wells.
4. Water Permit No. 2767-2 authorizes a total annual diversion of 3.8 acre feet of water.

WATER MANAGEMENT BOARD

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

SEP 26 2017

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 8 3/4 for casing than 6" Depth 500'
- b) Casing Type Steel or Plastic Diameter 5 1/2" or 6" Thickness schd 40
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material Hard Rock Granite, Shist
- f) Depth to Water (ground surface to water level) To be determined
- g) Distance to nearest existing domestic well:

On applicant's property None

On property owned by others 1/4 mile

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) To be determined
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System

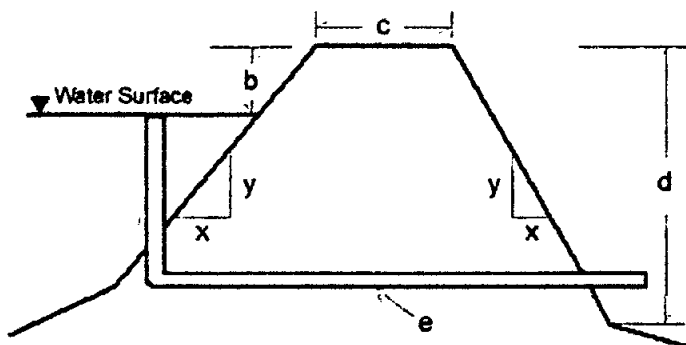
3. Dugout Information

- 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

Sec 35
T002S
R03E

Sec 36
T002S
R03E

Sec 31
T002S
R04E

Sec 2
T003S
R03E

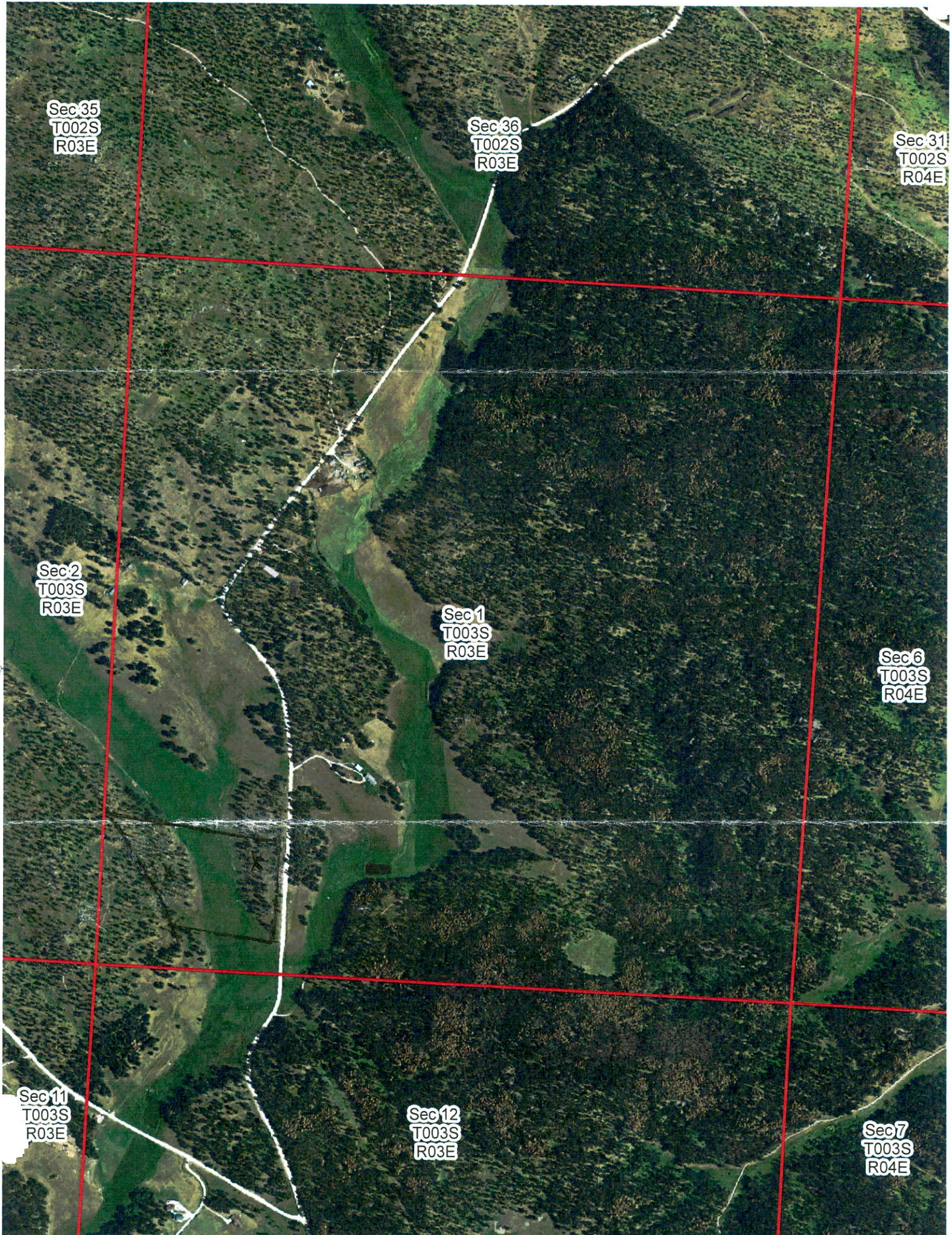
Sec 1
T003S
R03E

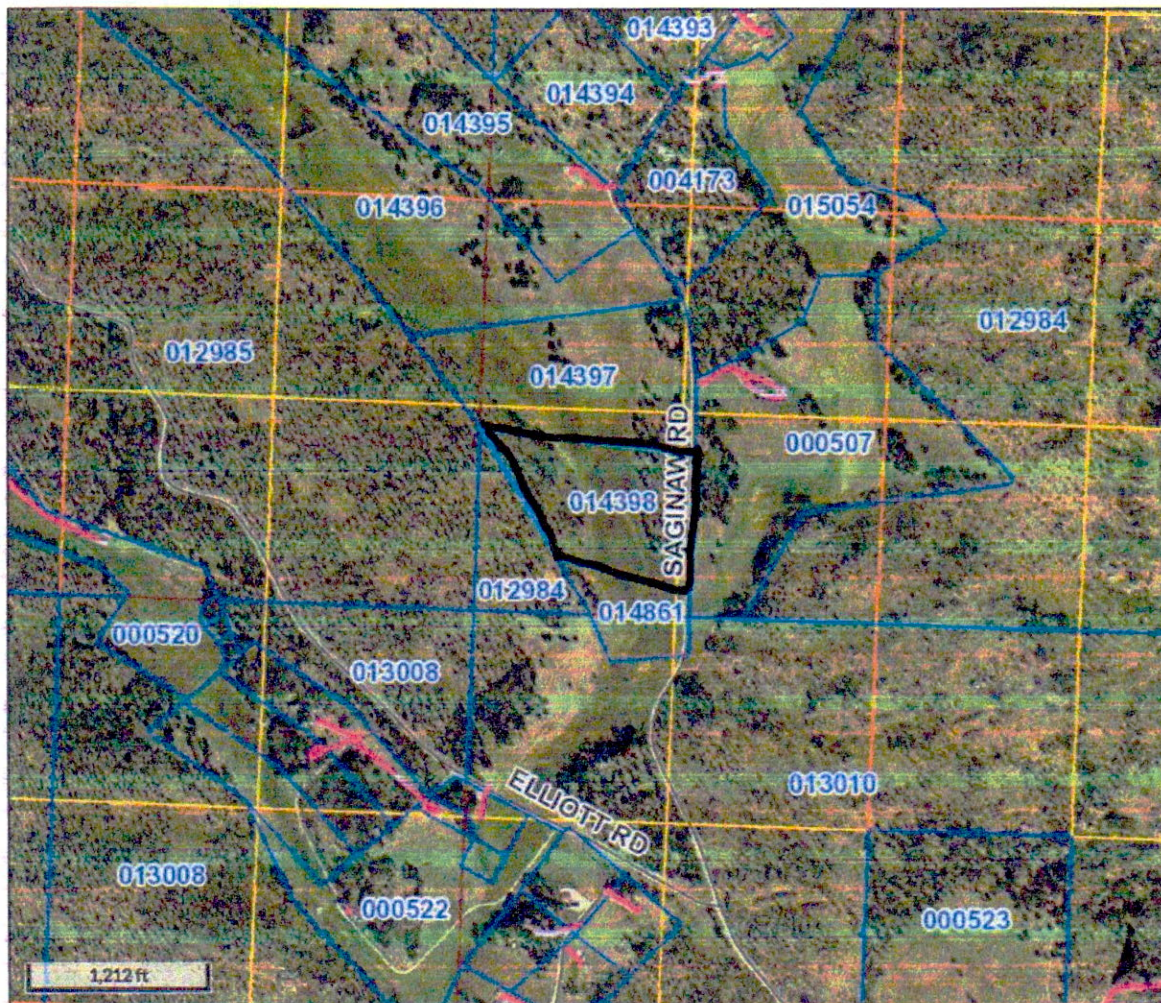
Sec 6
T003S
R04E

Sec 11
T003S
R03E

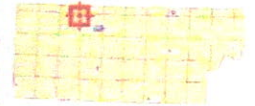
Sec 12
T003S
R03E

Sec 7
T003S
R04E





Overview



Legend

- Corporate Limits
- Townships
- Roads
- Driveways
- Parcels
- Sections
- Quarter Sections
- Quarter Quarters

Parcel ID	014398	Alternate ID	n/a	Owner Address	MCDILL MICHAEL & TERESA
Sec/Twp/Rng	001/0003/003	Class	Agricultural		1155 ELK SPRINGS DR
Property Address		Acreage	22.31		GLENWOOD SPGS CO 81601-9404
District	16.1-1-1-1-0-0				
Brief Tax Description	MCDILL SUB PHASE II - LOT F1 SEC 1/12 T3 R3 22.31 AC AC				
	0030300100000406				
	(Note: Not to be used on legal documents)				

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

Date created: 6/22/2017

Last Data Uploaded: 6/22/2017 12:35:51 AM

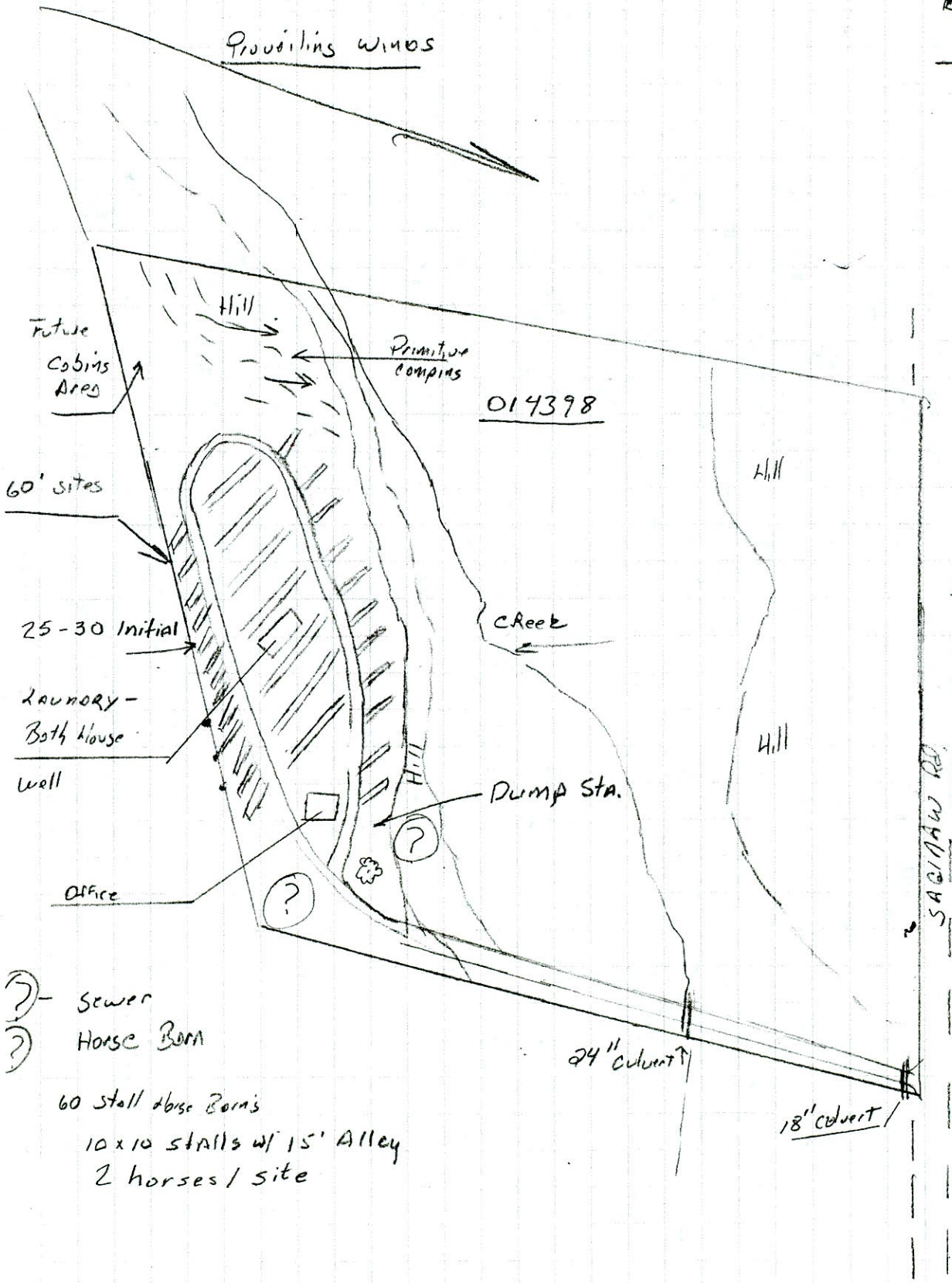


Developed by
The Schneider Corporation

Not To Scale

N

Prevailing winds



014398

Future
Cobins
Area

60' sites

25-30 Initial

Laundry -
Bath house

Well

Office

Creek

Pump Sta.

Hill

Hill

SACINAW RD.

24" culvert

18" culvert

- ? - Sewer
- ? - Horse Barn

60 stall horse Barns
10x10 stalls w/ 15' Alley
2 horses / site

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date June 26, 20 17

RECEIVED OF Sheri Spurlock 4004 Tiffany Square Alpharetta, GA

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

Fee for Application for Permit No. <u>2767-2</u> to Appropriate Water, to construct and to put water to beneficial use	100	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>2767-2</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	300 00

No. **08279**

By

Jeanne Goodman
Chief Engineer

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JUN 26 2017

WATER RIGHTS
PROGRAM

June 22, 2017

Sheri Spurlock
4004 Tiffany Square
Alpharetta, GA 30009
770 309 7335

Eric Gronlund
Department of Natural Resources, Water Rights Program
523 East Capitol Avenue
Pierre, SD 57501-3182
605 773 3352

Dear Mr. Gronlund,

Thank you for all your help in filing this application. As I mentioned I am in the process of purchasing property off Saginaw Rd. in Custer County. My due diligence period ends July 7th and I understand that this process will take a minimum of 60 days to complete as long as it remains uncontested. I will be asking for a continuance of the due diligence until I receive an answer on this application.

Please contact me at 770 309 7335 or at Sheri@TheManorMaids.com with any questions or further instructions you may have. In addition, Chuck and Becky Howe with Howe Well Drilling and Excavating will be drilling the well and installing the septic system. They may be reached at 605 673 4722 or at RaceHowe@gwtc.net if you have questions that may be better answered by them.

It has been a pleasure working with you and I sincerely hope this appropriation is approved.

All My Best,



Sheri Spurlock



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

June 26, 2017

Sheri Spurlock
4004 Tiffany Square
Alpharetta GA 30009

Dear Ms. Spurlock:

Thank you for submitting the *Application for a Permit to Appropriate Water* for commercial use in Custer County. In order to complete the application, the following is required.

- A map needs to be submitted that references a government section corner or quarter corner including section, township and range. For your use, I have enclosed an aerial photo map with those designations. Please outline the area of the horse and RV campground and mark the two proposed well locations with "X"s.
- The application states the 2 wells will be located in the NW 1/4 SW 1/4 Section 1-T3S-R3E. It appears the entire campground area will be located in the SW 1/4 SW 1/4 of Section 1-T3S-R3E. Once the map is returned with the wells marked, the actual location will be determined.
- The application requests a pump rate of 25 gallons per minute (gpm). In addition to the pump rate, the application needs to include the annual volume of water needed for your project. It is unrealistic that 25 gpm will be pumped continuously during an entire year. Therefore, DENR requests an estimate of the annual volume to be used. A general practice is to convert the pump rate to a volume in acre-feet of water annually based on 60% pumping. Applying this 60% rate to 25 gpm over the course of a year equates to 24 acre-feet of water annually. Do you concur with this amount?

If you have any questions, please contact Eric Gronlund or me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures

Schlaak, Karen

From: Gronlund, Eric
Sent: Tuesday, June 27, 2017 11:39 AM
To: 'Sheri Spurlock'
Cc: Schlaak, Karen
Subject: RE: [EXT] Answers needed for water rights application

Sheri – Great! -- 1,241,085 gallons per year equates to 3.8 acre feet of water/annually. We will amend the application accordingly. Eric

From: Sheri Spurlock [<mailto:Sheri@TheManorMaids.com>]
Sent: Tuesday, June 27, 2017 11:35 AM
To: Gronlund, Eric
Subject: [EXT] Answers needed for water rights application

Hi Eric,

Ok...here goes!

An average horse drinks between 5-10 gallons of water a day so we will say 10 gallons per day per horse.

Max of 120 horses a day when and if phase 2 is completed $120 \times 10 = 1,200$ gallons per day $\times 183$ days 219,600 gallons per season.

The National Fire Protection standard for RV parks and campground construction requires the waste treatment system to be based on a minimum discharge of 50 gallons per day per site and a maximum of 100 gallons per day per site so I am saying 75 gallons per site per day. 65 possible sites $\times 75 = 4875$ gallons per day $\times 183$ days = 892,125 gallons per season, if phase 2 is ever built out.

Since all of my sites will be full hook up with water, sewage and electricity I don't feel there will be that much use of the bath house even though I am required to have 4 showers, 4 toilets and 4 vanities available based on the number of campsites I have. So I am going to say that usage may be equal to 4 sites. $75 \times 4 = 300$ gallons per day $\times 183$ days = 54,900 gallons per season.

The average person in a home uses 102 gallons of water per day so $102 \times 365 = 37,230$

If I had a full time guest that would double to 74,460 per year.

Horses	219,600	gallons per season
Sites	892,125	gallons per season
B. House	54,900	gallons per season
Residence	74,460	gallons per year

Total 1,241,085 gallons per year based on the possible build out of phase 2 and 100% occupancy 100% of the time the campground is open. I think that figure is really high as we may not even open until the first of May and close the end of September.

If you think this figure is unrealistic and might jeopardize the approval I will be happy to make the changes to reflect a more accurate figure.

If it needs to be in the special format per acre you mentioned would you be so kind as to convert it for me?

I have an email into the Howe's regarding the pump rate from the well to support 6,477 gallons per day.

Thank you so much for your patients with me on this....I am learning ☺



June 30, 2017

RECEIVED

JUL 05 2017

WATER RIGHTS
PROGRAM

Karen Schlaak

Water Rights Program

Dear Ms. Schlaak:

Thank for helping me make the necessary corrections on my water rights application.

I have enclosed the map you sent with the rough location of the two wells marked 1 and 2 and the outline of the property.

I estimated on the very high side the water consumption to run 1,241,085. Eric was kind enough to convert it to 3.8 acre feet of water annually.

I hope this information will complete what is needed on the application. If not and you have additional questions please just let me know.

Many Thanks for all your help,

A handwritten signature in cursive script, reading "Sheri Spurlock".

Sheri Spurlock

770 309 7335



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

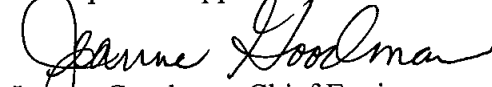
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2767-2, Sheri Spurlock**

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. 2767-2, Sheri Spurlock, 4004 Tiffany Square, Alpharetta GA 30009.

The Chief Engineer is recommending APPROVAL of Application No. 2767-2 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 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.
2. The wells authorized by Permit No. 2767-2 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock wells.
4. Water Permit No. 2767-2 authorizes a total annual diversion of 3.8 acre feet of water.

See report on application for additional information.


Jeanne Goodman, Chief Engineer
August 31, 2017

NOTE: The wells must be constructed in accordance with South Dakota well construction standards including the well locations being setback from pollution sources, wastewater system components and sewer lines as set forth in the standards. A South Dakota licensed well driller will be aware of these regulations dealing with well locations.

Report to the Chief Engineer
Water Permit Application No. 2767-2
Sheri Spurlock
August 22, 2017

Water Permit Application No. 2767-2 proposes to appropriate 3.8 acre-feet of water annually at a maximum instantaneous diversion rate of 0.055 cubic feet per second (cfs). The diversion points for this application are two proposed wells to be completed into the crystalline rock aquifer to be located in the SW ¼ SW ¼ Section 1 in T3S-R3E. The water is to be used for domestic and commercial use at a horse and RV campground located in the SW ¼ SW ¼ Section 1 in T3S-R3E in Custer County approximately six miles northwest of Custer.

Aquifer: Crystalline Rock (CRSL)

Hydrogeology and Aquifer Characteristics

In western South Dakota, wells completed into the Precambrian aged crystalline rock have not encountered measureable amounts of groundwater outside of the Black Hills area (Driscoll and Carter, 2001). Rather than one single aquifer across the entire Precambrian aged core of the Black Hills, the crystalline rock aquifer consists of numerous localized aquifers in the core areas where extensive fractures or weather zones allow for the transmission of water (Driscoll and Carter, 2001). The crystalline rocks of this aquifer have low primary porosities, so water is conveyed to wells along fractures, joints, and faults (Rahn, 1979). Therefore, water availability in the aquifer is site specific and depends upon the occurrence of fractures, joints, and faults (secondary porosity) in the subsurface at a given site.

This application did not include any testhole information; however the geologic units in the area are all crystalline rock types. The wells are in the vicinity of a contact between proximal and distal metagraywackes (Redden, and DeWitt, 2008). The well sites are located about 0.76 miles southwest of the Atlantic Hill anticline (Redden, and DeWitt, 2008). Redden, and DeWitt (2008) also map a minor fold about 0.30 miles southeast of the well sites. In the area of the well sites, the aquifer is considered unconfined, however due to the secondary porosity of the aquifer, it may behave more like a confined aquifer.

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

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability there is unappropriated water available for the applicant's proposed use, the proposed diversion can be developed without unlawful impairment of existing rights, and the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and potential effects on existing rights from the aquifer that are pertinent to this application.

Water Availability

The probability of unappropriated water being available from the Crystalline Rock aquifer can be evaluated by considering SDCL 46-6-3.1 which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.” Additionally, pursuant to SDCL 46-1-6 (17) a water distribution system is defined as “a system of piping, valves, storage tanks, pumps, and appurtenances by which water is conveyed for domestic or municipal use by a common distribution system, including a municipality as defined in § 9-1-1, a nonprofit rural water supply company as defined in § 10-36A-1, a water user district as defined in § 46A-9-2, a sanitary district as defined in chapter 34A-5, or homes, including mobile homes as defined in § 32-3-1, and manufactured homes as defined in § 34-34A-1.1 supplied by a common distribution system.” Here, the Crystalline Rock aquifer is older than the Greenhorn Formation. However, a water distribution system is not involved, so water availability in the aquifer will need to be considered.

Recharge to the aquifer is from infiltration of precipitation and streamflow losses. Discharge from the aquifer is via pumping from wells, evapotranspiration, and seepage to streams. In this area, the Crystalline Rock aquifer likely contributes to base flow in French Creek and its tributaries (Driscoll and Carter, 2001). Driscoll and Carter (2001) estimated recharge to the Crystalline Rock aquifers to be equal to withdrawals (3,600 acre-feet per year), however it was noted that actual recharge to the crystalline aquifers must be much larger then estimated to account for discharge to streams. Driscoll and Carter (2001) noted for crystalline rock aquifers, “Recharge conditions are highly transient and have large spatial variability; thus, quantification is not attempted.” Additionally, data is not available to attempt delineation of the localized aquifers within the crystalline core area of the Black Hills. Therefore, there are no estimates of either average annual recharge to or average annual withdrawal from the localized aquifer.

Observation Wells

The Water Rights Program monitors two observation wells completed into the Crystalline Rock aquifer in the Black Hills. Neither of these observation wells are located in the immediate area of Application No. 2767-2. Due to the site specific nature of the Crystalline Rock aquifer, these observation wells do not describe local characteristics in the aquifer. However, they can provide information as to general aquifer characteristics.

The nearest observation well (CU-86A) is located about 6.4 miles to the east southeast of the well sites. The hydrograph for this observation well is shown in Figure 1. In examining Figure 1, water levels can be seen responding to climatic conditions rising during wet periods and decreasing during drier periods. Water levels fluctuate as much as 40 feet in this observation

well in response to climatic conditions. The behavior of the Precambrian Crystalline Rock aquifer in the area of observation well CU-86A should be similar to the aquifer in the area of this application, since the crystalline rock is exposed at both locations and experience similar climatic conditions. At the other Crystalline Rock aquifer observation well in the Black Hills (located about 22 miles to the northeast), the aquifer is underlying other geologic units, which would make it less reflective of the characteristics of the aquifer at the well site. Therefore, only the hydrograph for observation well CU-86A is presented. In general when examining Figure 1, the effects of pumping from the aquifer are masked by climatic conditions indicating that the aquifer is dominated by natural conditions (recharge to and natural discharge from the aquifer). Since recharge to and natural discharge from the aquifer can be captured for well withdrawals, this proposed appropriation is not expected to cause withdrawals to exceed recharge in the area of the well sites.

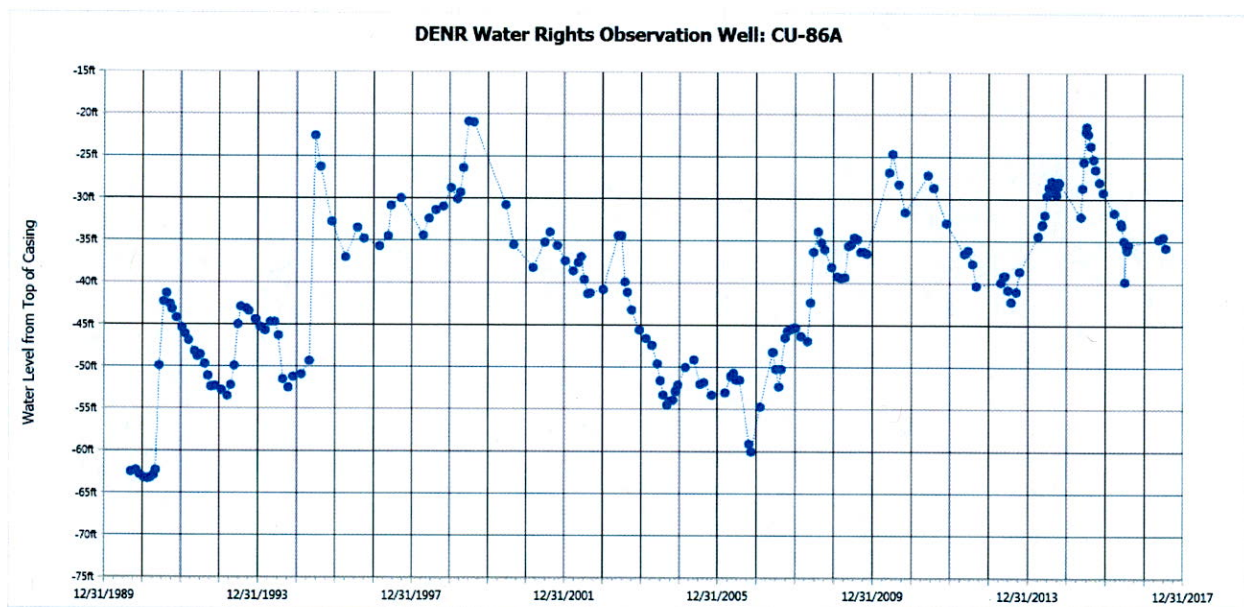


Figure 1: Hydrograph of observation well CU-86A (Water Rights, 2017a)

Existing Users

Water rights/permits currently authorized to appropriate water from the Crystalline Rock aquifer are shown in Figure 2 and summarized in Table 1. The nearest water rights completed in the Crystalline Rock aquifer to the well sites for this application is Water Right No. 2251-2 located about 0.9 miles to the southeast. Water Right No. 2251-2 is held by Atlantic Mt. Ranch for 0.011 cfs for institutional use (Water Rights, 2017b). Table 1 also contains estimated annual water use based on water rights/permits that are limited by diversion rate historically using less than 60% of full time pumping at the permitted diversion rate. There are several domestic well completion reports on file with the Water Rights Program the within one mile of this application that are all completed into the Crystalline Rock aquifer (Water Rights, 2017c). In examining the

2016 National Agriculture Imagery Program (NAIP) aerial imagery for this area, the nearest buildings are approximately 0.25 miles away from the well sites. However, due to the close proximity of the well sites to each other (within approximately 1,000 feet) any drawdown as a result of pumping from the wells will likely impact each other before any potential impacts would be noted by other water rights/permits or domestic users in the area.

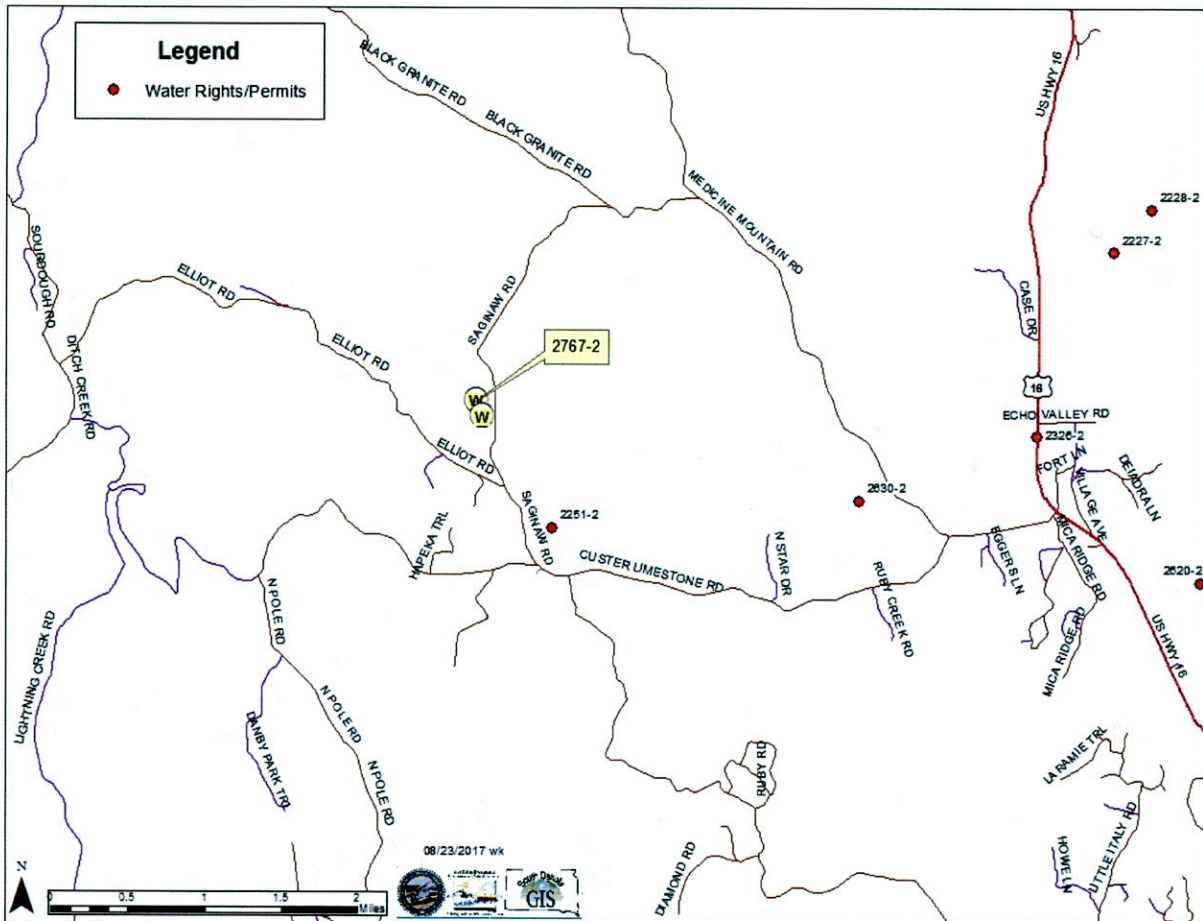


Figure 2: Water rights/permit currently authorized to appropriate water in the vicinity of the well sites for Water Permit Application No. 2767-2 (Water Rights, 2017b)

Table 1: Summary of Water Rights shown in Figure 2 (Water Rights, 2017b)

Permit No.	Name	Status	Use Type	Rate (cfs)	Estimate Annual Use (Acre-feet/yr)
2227-2	Crazy Horse Memorial Foundation	LC	COM	0.155	67.3
2228-2	Crazy Horse Memorial Foundation	LC	COM	0.042	18.2
2251-2	Atlantic Mt. Ranch	LC	INS	0.011	4.8
2326-2	Heritage Village	LC	COM/SHD	0.033	14.3
2620-2	Brenda Lee Hellwig	LC	COM	0.022	9.6
2630-2	Crazy Horse Memorial Foundation	LC	COM	0.080	34.8

LC- licensed, COM-commercial, INS- institutional, SHD-suburban housing development

An adequate well as defined by Administrative Rule of South Dakota (ARSD) 74:02:04:20(6) is “a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near as possible to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.” In the past the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown may occur. ARSD 74:02:04:20(7) defines an adversely impacted domestic well as, “a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner's needs.” While in most aquifers 20 feet is an adequate depth of water for domestic wells, in the Crystalline Rock aquifer 20 feet below the top of the aquifer is seldom a sufficient depth for a well to be a dependable water supply. This is due to the low porosity of the crystalline rock and water availability at a given location being linked to the unpredictable occurrence of secondary porosity, so wells that meet the definition of an adequate well might not yield sufficient water for a well owner's needs. The precise drawdown effects at the well sites will depend on aquifer characteristics in the immediate vicinity of the wells, and determination of the exact effects would require additional data and testing. When compared with documented water level variability of 40 feet as a result of climatic conditions (as demonstrated in Figure 1), potential drawdown as the result of 0.055 cfs (25 gallons per minute) is expected to be relatively insignificant when compared with climatically driven water level fluctuations. Additionally, when considering observation well CU-86A (Figure 1) water levels are dominated by climatic conditions even with seven water rights/permits within one mile with maximum diversion rates totaling 3.5 cfs.

Well Locations

The information provided for this application indicated that the waste disposal system had not yet been determined. ARSD 74:02:04:24 specifies minimum set back distances for well from pollution sources, wastewater system components, and sewer lines.

Conclusions

1. Water Permit Application No. 2767-2 proposes to appropriate 3.8 acre-feet of water annually at a maximum instantaneous diversion rate of 0.055 cfs from two proposed wells to be completed into the Crystalline Rock aquifer to be located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 1 in T3S-R3E. The water is to be used to for domestic and commercial use at a horse and RV campground located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 1 in T3S-R3E.
2. Average annual recharge to the local Crystalline Rock aquifer has not been quantified; however based on best information reasonably available (observation well data) the

appropriation proposed by this application is not expected to cause the average annual withdrawals from the aquifer to exceed the average annual recharge to the aquifer.

3. Available information indicates that any well interference as a result of this application, if approved, is not expected to be adverse.


Whitney Kilts
SDDENR-Water Rights Program

References

- Driscoll, D. G. and Carter J. M., 2001, Hydrologic Conditions and Budgets for the Black Hills of South Dakota, through Water Year 1998. Water-Resources Investigations Report 01-4226. USGS. Rapid City, SD.
- Rahn, P. H., 1979, Ground Water Resources of Western South Dakota. South Dakota School of Mines and Technology Project #2533. Rapid City, South Dakota. p 2-1 to 2-3.
- Redden, J.A., and DeWitt, E., 2008, Maps showing geology, structure, and geophysics of the central Black Hills, South Dakota: U.S. Geological Survey Scientific Investigations Map 2777.
- Water Rights. 2017a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2017b. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2017c. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Affidavit of Publication

STATE OF SOUTH DAKOTA

County of Pennington

SS:

Sheri Sponder being first duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, an employee of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, the owner and publisher of the RAPID CITY JOURNAL, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published in the English language, at and within an office maintained by the owner and publisher thereof, at Rapid City, in said Pennington County, and has been admitted to the United States mail under the second class mailing privilege for at least one year prior to the publication herein mentioned; that the advertisement, a printed copy of which, taken from said Rapid City Journal, the paper in which the same was published, is attached to this sheet and made a part of this affidavit, was published in said paper once each day for one successive day, the first publication there of being on the 7th day of Sept 2017 that the fees charged for the publication there of are 61 dollars and 69 cents.

Sheri Sponder

Subscribed and sworn to before me this 15th day of September, 2017.

Ken Shepard
Notary public

8/21/19

My commission expires

Sept. 7 L21057449
NOTICE OF APPLICATION NO.
2767-2 to Appropriate Water

Notice is given that Sheri Spurlock, 4004 Tiffany Square, Alpharetta GA 30009 has filed an application for a water permit to appropriate 3.8 acre feet of water annually at a maximum diversion rate of 0.055 cubic feet of water per second (25 gallons per minute) from two wells to be completed into the Crystalline Rock (approximately 500 feet deep) located in the SW 1/4 SW 1/4 Section 1 for domestic and commercial use at a horse and RV campground located in the SW 1/4 SW 1/4 Section 1; all in T3S-R3E which is approximately 6 miles northwest of Custer SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2767-2 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.

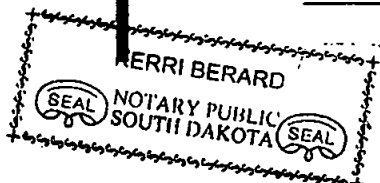
Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss 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 September 18, 2017.

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.

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

(Published once at the total approximate
cost of \$61.69)



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

Department of Environment
& Natural Resources - Notice of
Application #2767-2 TO

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:

Sept 6, 2017 ; _____ ; _____ ;

_____ ; _____ ; _____ ;

_____ ; _____ ; _____ ;

_____ ; _____ ; _____ ;

_____ ; _____ ; _____ ;

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

Charles W. Najacht

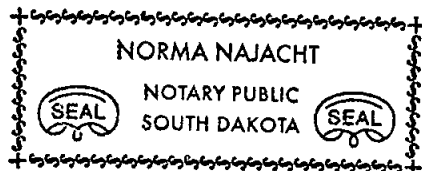
Subscribed and sworn to me before this 6th

of September 20 17 ;

Norma Najacht

NOTARY PUBLIC

MY COMMISSION EXPIRES: May 5, 2018



EIVED

SEP 11 2017

WATER RIGHTS
PROGRAM

NOTICE OF APPLICATION NO. 2767-2 TO

APPROPRIATE WATER

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Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2767-2 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 September 18, 2017.

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

Published once at an approximate cost of \$25.40.

9/6

Schlaak, Karen

From: Gronlund, Eric
Sent: Friday, September 01, 2017 10:44 AM
To: 'custerchronicle@gwtc.net'
Cc: Schlaak, Karen; Sheri Spurlock (Sheri@TheManorMaids.com)
Subject: 2767-2, Sheri Spurlock
Attachments: 2767-2public.short.docx

Attached is a notice to be published on September 6, 2017.

Sheri Spurlock, 4004 Tiffany Square, Alpharetta GA 30009 (770 309-7335) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit of publication ASAP to the Water Rights Program, 523 E Capitol Avenue, Pierre SD 57501.

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

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

Gronlund, Eric

From: Jacqi Barth <jacqi.barth@rapidcityjournal.com> on behalf of RCY Legals <legals@rapidcityjournal.com>
Sent: Friday, September 01, 2017 11:35 AM
To: Gronlund, Eric; RCY Legals
Cc: Schlaak, Karen; Sheri Spurlock (Sheri@TheManorMaid.com)
Subject: RE: [EXT] 2767-2, Sheri Spurlock

Scheduled to run Sept 7 in the Rapid City Journal; Cost of \$61.69 paid in full by Sheri Spurlock on Sept 1; Ad # 21057449

Thank You,

Jacqi Barth
Advertising Coordinator
Desk: 605-394-8318
www.RapidCityJournal.com



From: Gronlund, Eric [<mailto:Eric.Gronlund@state.sd.us>]
Sent: Friday, September 01, 2017 9:44 AM
To: RCY Legals
Cc: Schlaak, Karen; Sheri Spurlock (Sheri@TheManorMaid.com)
Subject: 2767-2, Sheri Spurlock

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



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.**

August 31, 2017

Sheri Spurlock
4004 Tiffany Square
Alpharetta GA 30009

Dear Ms. Spurlock:

Water Permit Application No. 2767-2 for commercial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Custer County Chronicle printed at Custer SD (Ph # 605-673-2217) 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. 2767-2 to Appropriate Water

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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

SEP 26 2017

Sheri Spurlock
4004 Tiffany Square
Alpharetta GA 30009

Dear Ms. Spurlock:

Enclosed is Water Permit No. 2767-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

A 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 information 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

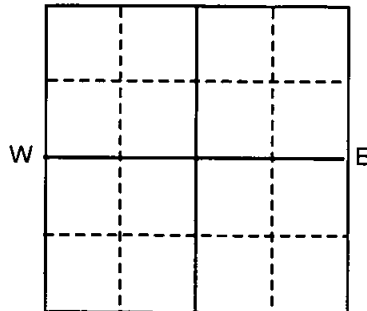
2767-2

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 NW 1/4 Sec 1 Twp 3S Rg 3ECounty Custer

North

Please mark well
location with an "X"

Well Completion Date

July 16, 2018

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Down Hole Hammer

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
160.0 LB/FT	6.00 IN	0.0 FT	32.0 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	10	16.0 Lb/gal	0.0 Ft	32.0 Ft
Cement		Lb/gal	Ft	Ft

Describe grouting procedure _____

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? Chlorine Tablets
☐ No, Why Not? _____

 Lab to which water
 quality sample sent for analysis

Well Owner: Sheri Spurloc

Business Name: _____

Address: 24795 Saginaw Rd.City, State, Zip: Custer SD 57730

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Black Dirt	0	4
Soft Shist	4	20
Mica Shist Hard	20	310

STATIC WATER LEVEL 40.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow 15.0 through _____ Inch pipeControlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____☐ 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 # 363 and this
 report is true and accurate.
Drilling firm: Howe Well Drilling & Excavating, Inc.

Signature of License Representative: _____

RECEIVED

Signature of Well Owner or Equitable Property Holder: _____

JAN 25 2019

WATER RIGHTS
PROGRAM

Date: _____