

WATER PERMIT NO. 8439-3

Name of Applicant: **Grant-Roberts RWS**

Address: **PO Box 145, Milbank SD 57252**

Phone: **605 432-6793**

Amount of Water Claimed: **1.58 cfs (614 AF)**

Total Acres: **NA**

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

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

County: **Codington**

Type of Waste Disposal System:

Location: **1 mile north of South Shore**

PRIORITY

Date Received: **8-6-20**

Application/License Fee: **\$ 1,350**

Corrected Application Received: **8-24-20**

Period of Annual Use: **Jan 1 – Dec 31**

Remarks: **Increase the diversion rate authority authorized by Water Right No. 6654-3**

Diversion Point: **NE 1/4 SE 1/4, S 1/2 NE 1/4, NE
1/4 NW 1/4 Sec 10-T119N-R51W**

Land to be Irrigated: **NA**

Depth of Well: **140 feet deep**

Well Driller:

Remarks:

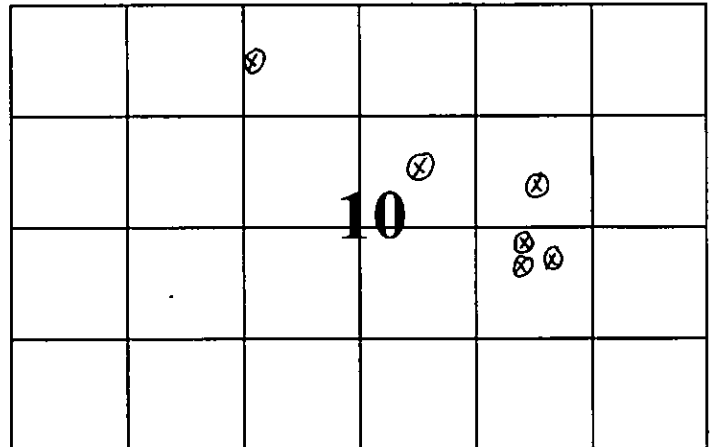
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **8-24-20**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA WATER PERMIT NO. 8439-3

Date of first receipt of application August 24, 2020.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8439-3 to Grant-Roberts Rural Water System Inc., c/o Brent Hoffmann, PO Box 145, Milbank SD 57252 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. 8439-3 increases the diversion rate and annual volume authorized by Water Right No. 6654-3 and Water Permit No. 8321-3. Water Right No. 6654-3 authorizes 1,074 acre-feet of water annually at a maximum pump rate of 3.56 cubic feet of water per second (cfs) from six wells completed into the Antelope Valley Aquifer located in the NE 1/4 SE 1/4, S 1/2 NE 1/4, NE 1/4 NW 1/4 Section 10-T119N-R51W. Water Permit No. 8321-3 authorizes an additional 307 acre-feet of water from the six wells authorized by No. 6654-3 for a combined total of 1,381 acre-feet. This permit authorizes an additional 1.58 cfs and an additional 614 acre-feet of annual volume from the six existing wells described above. This permit, Water Permit No. 8321-3, and Water Right No. 6654-3 combined would authorize a total of 5.14 cfs and 1,995 acre-feet of water annually from the six existing wells. The site of the existing well field is located one mile north of South Shore SD.

The rural water system serves users in Codington, Grant, Roberts and Deuel Counties in South Dakota and Lac Qui Parle and Big Stone Counties in Minnesota. In South Dakota this includes the communities of South Shore, Stockholm, Strandburg, Wilmot, Twin Brooks, Big Stone City, Corona and Marvin.

2. The water appropriated shall be used for the purpose of rural water system use and may not exceed the amount of water needed for beneficial use.
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. 8439-3 is November 9, 2020.
5. The date from which applicant may claim right is August 24, 2020.
6. One-fifth of the construction is to be completed on or before May 9, 2023.
7. All construction is to be completed on or before November 9, 2025.
8. Water is to be put to beneficial use on or before November 9, 2029.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The wells approved under Water Right No. 6654-3 and for use 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 Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Antelope Valley aquifer.
3. Water Right No. 6654-3, Water Permit No. 8321-3, and this Permit, combined, authorize a total annual diversion of 1,995 acre-feet of water.

WATER MANAGEMENT BOARD

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

JAN 19 2021
date



RECEIVED *Originally submitted 8/6/20*
AUG 24 2020

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8439-3</u> (office use only) Hydrologic Unit <u>07020001</u>	WATER RIGHTS PROGRAM
	Basin <u>Minnesota-Whetstone</u>	
	Newspaper <u>several</u>	

PAID
AUG 24 2020
Ck# 14073

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

Check use(s) of water:

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

Type of Application: (check one)

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

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

- Name to Appear on Water Permit Grant-Roberts Rural Water System Inc
Mailing Address PO Box 145 Milbank SD 57252
(Address) (City) (State) (Zip Code)
Phone 605 432-8793 Mobile _____ Email rwater1981@tnics.com
- Amount of water claimed 1.58 *CFS or 614 **GPM and 614 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***)Acres Feet - storage capacity of dam/dugout or annual use)
- Source of water supply 6 existing wells - NE 1/4 SE 1/4, S 1/2 NE 1/4, NE 1/4 NW 1/4
- Location of point of diversion all in Section 10-T119N-R51W County Codington
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☐ No
If "Yes," where will water be used? _____
(example - NW1/4 section 12-T104N-R53W)
- County or counties where water will be used Codington/Grant/Roberts/Deuel (SD) Lac Qui Parle/Big Stone (MN)
- Annual period during which water is to be used January 1 - December 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Water system is requesting additional water for the following reasons. Please see enclosed preliminary memo for additional information.

- 1) Provide water service to Corona SD and other communities in Grant & Roberts Counties (SD).
- 2) Provide water service to rural customers in Lac Qui Parle & Big Stone Counties (MN).
- 3) Continue to provide water service to existing customers with increasing water use.

Brent Hoffmann

I, Brent Hoffmann, the applicant, certify under
Name of Person Title (if applicable)

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

2015-10

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

Supplemental Information

(type or print)

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

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

b) If existing wells, how many 6 Provide copy of log(s), if available. Drilled by ____

For either Existing or Proposed Wells:

c) Well Depth (required) 140' Depth to Top of Water Bearing Material 110' Depth to Water from Surface 85'

d) Distance to nearest domestic well on applicant's property 560' Property owned by others approx. 3/4 mile

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) ____ Year Constructed ____

c) Connected to the City of ____ Sanitary System

3. Dugout Information

a) Surface Dimensions ____ Depth ____

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

4. Water Storage Dams

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

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

b) Freeboard ____

c) Crest Width ____

Crest Length ____

d) Height ____

e) Primary Outlet Capacity ____

If pipe, diameter ____

f) Secondary Spillway Capacity ____

Spillway Width ____

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

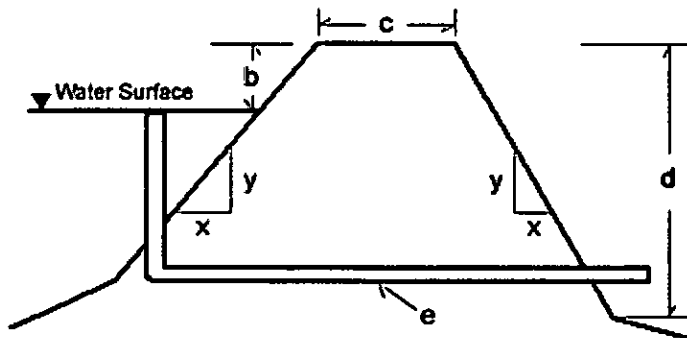
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

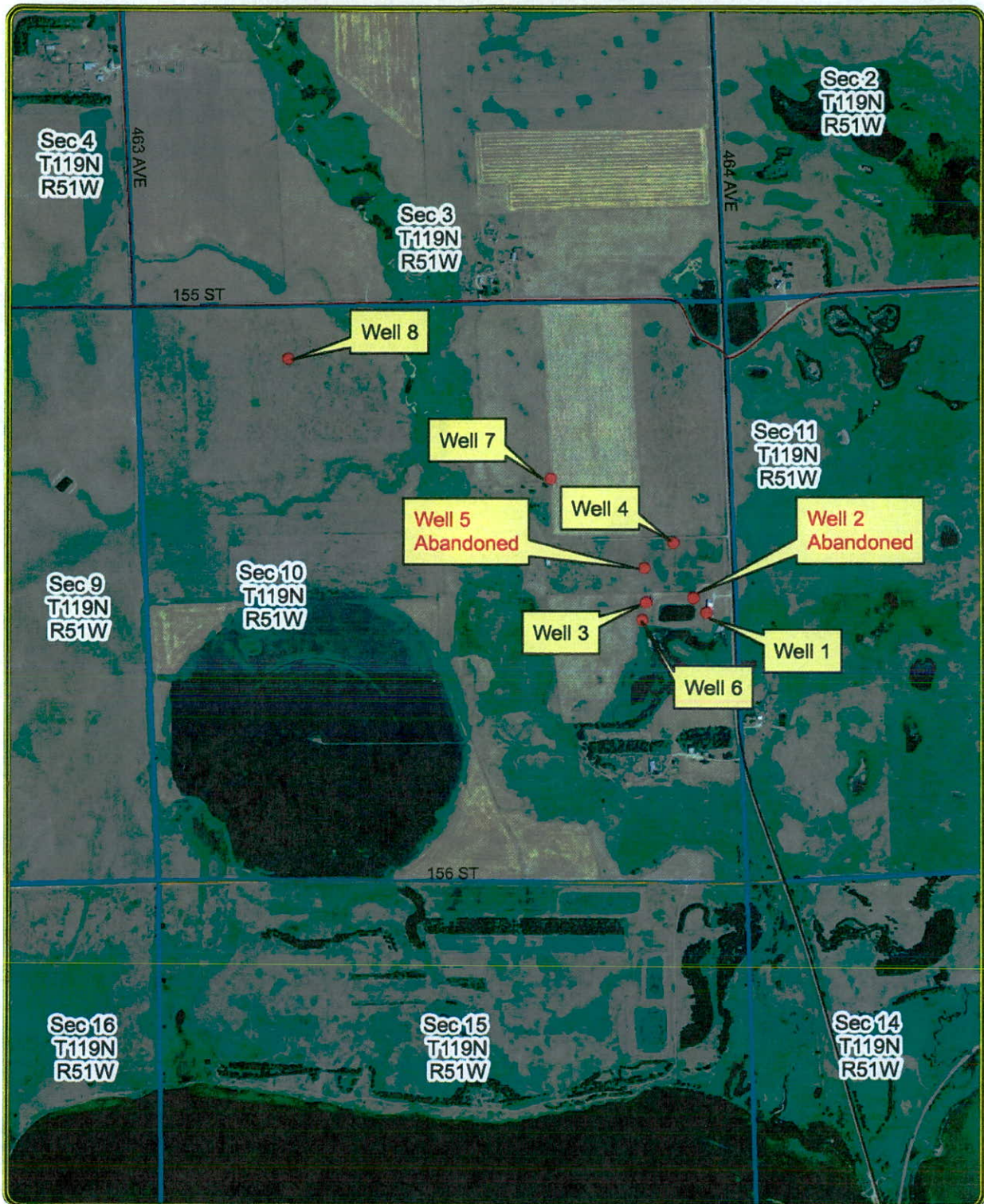
i) Storage ____ Acre Feet

j) Drainage Area Above Dam ____ Acres



Grant-Roberts Rural Water System

Water Permit Nos. 6654-3 and 5576A-3



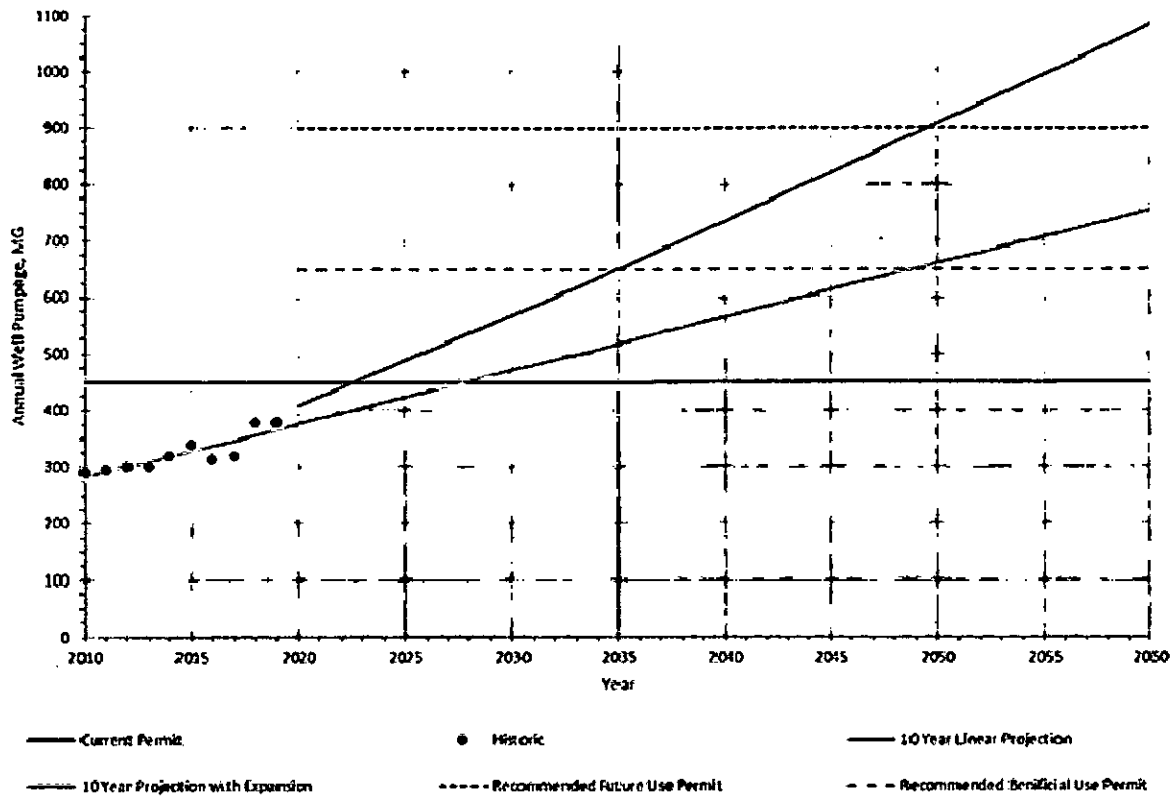
0 0.2 0.4 0.8 Miles

Mike DeFea
Mike DeFea
Natural Resources Engineer
DENR, Water Rights Program
March 31, 2014



South Dakota
Department of Environment
& Natural Resources
Protecting SD's Tomorrow... Today

Grant-Roberts RWS - Annual Well Pumpage



Feel free to contact me with any questions. Have a great 4th of July weekend!

Thanks,

Nathan A. Brandenburg, PE

DGR
ENGINEERING
1302 South Union Street
Rock Rapids, IA 51246
phone: 712-472-2531
cell: 712-451-8422
www.dgr.com
Trusted. Professional. Solutions.

Memo



TO: Grant-Roberts RWS, Brent Hoffmann, Manager

FROM: Nathan Brandenburg, PE

DATE: July 27, 2020

RE: Summary and Recommendations for Grant-Roberts RWS Water Rights

Existing Permits

Table 1. Summary of the existing Grant Robert's RWS beneficial water right permits.

Permit No.	Approval	Additional Diversion Rate	Additional Annual Appropriation
4212-3	1978	1.15 cfs	500 acft
5576-3	1992	1.52 cfs	120 acft
5576A-3	2004	0 cfs	454 acft
6654-3	2005	0.89 cfs	0 acft
8321-3	2018	0 cfs	307 acft
		3.56 cfs	1,381 acft
		=	=
		1,598 gpm	449,969,573 gal
		=	=
		2.11 MGD	450 MG
		for a 22 hr production day	per year

Historic Peak Day
~1.6MGD

Historic Maximum Annual Pumpage
~380MG in 2018 and 2019 is projected to be similar.

Expansion Opportunities

Table 2. Estimated annual water use of unserved housing units based on 3000 gallons per month per housing unit.

Towns (SD)	Housing Units (2013-2017, 5 year Estimate)	Est. Annual Water Use
South Shore	89	3,204,000 gal
Corona	57	2,052,000 gal
Marvin	22	792,000 gal
Summit	155	5,580,000 gal
Subtotal		11,628,000 gal
Water Inefficiency	20%	2,325,600 gal
Total		13,953,600 gal
		=
		14 MG
Townships (MN)	Housing Units (2013-2017, 5 year Estimate)	Est. Annual Water Use
Big Stone Township, Big Stone County	224	8,064,000 gal
Ortonville Township, Big Stone County	48	1,728,000 gal
Yellow Bank Township, Lac qui Parle County	58	2,088,000 gal
Walter Township, Lac qui Parle County	67	2,412,000 gal
Augusta Township, Lac qui Parle County	56	2,016,000 gal
Subtotal		16,308,000 gal
Water Inefficiency	20%	3,261,600 gal
Total		19,569,600 gal
		=
		20 MG

Historic Well Pumpage and Linear Projected Growth

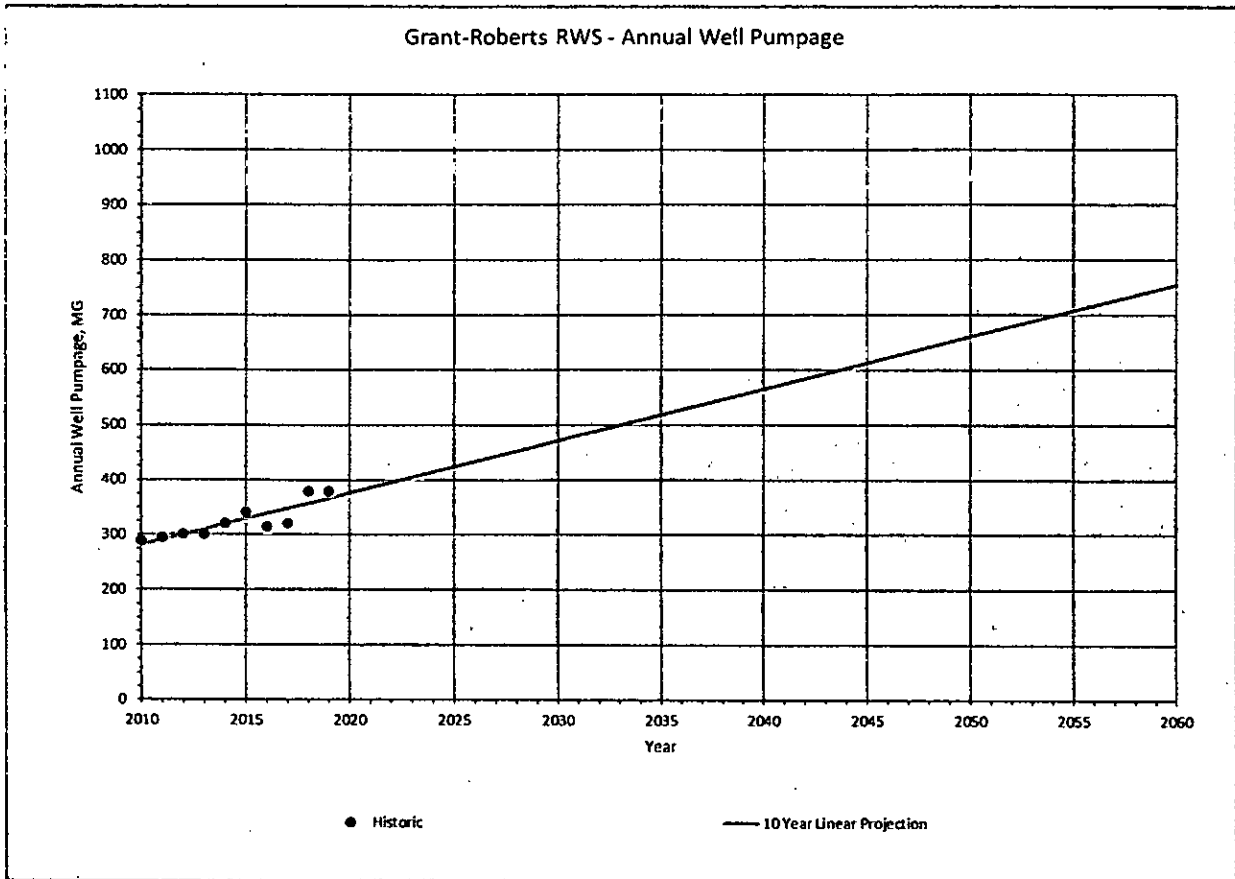


Figure 1. Historic well pumpage and linear projected growth.



Figure 2. Expansion areas identified in Table 2.

Recommendation

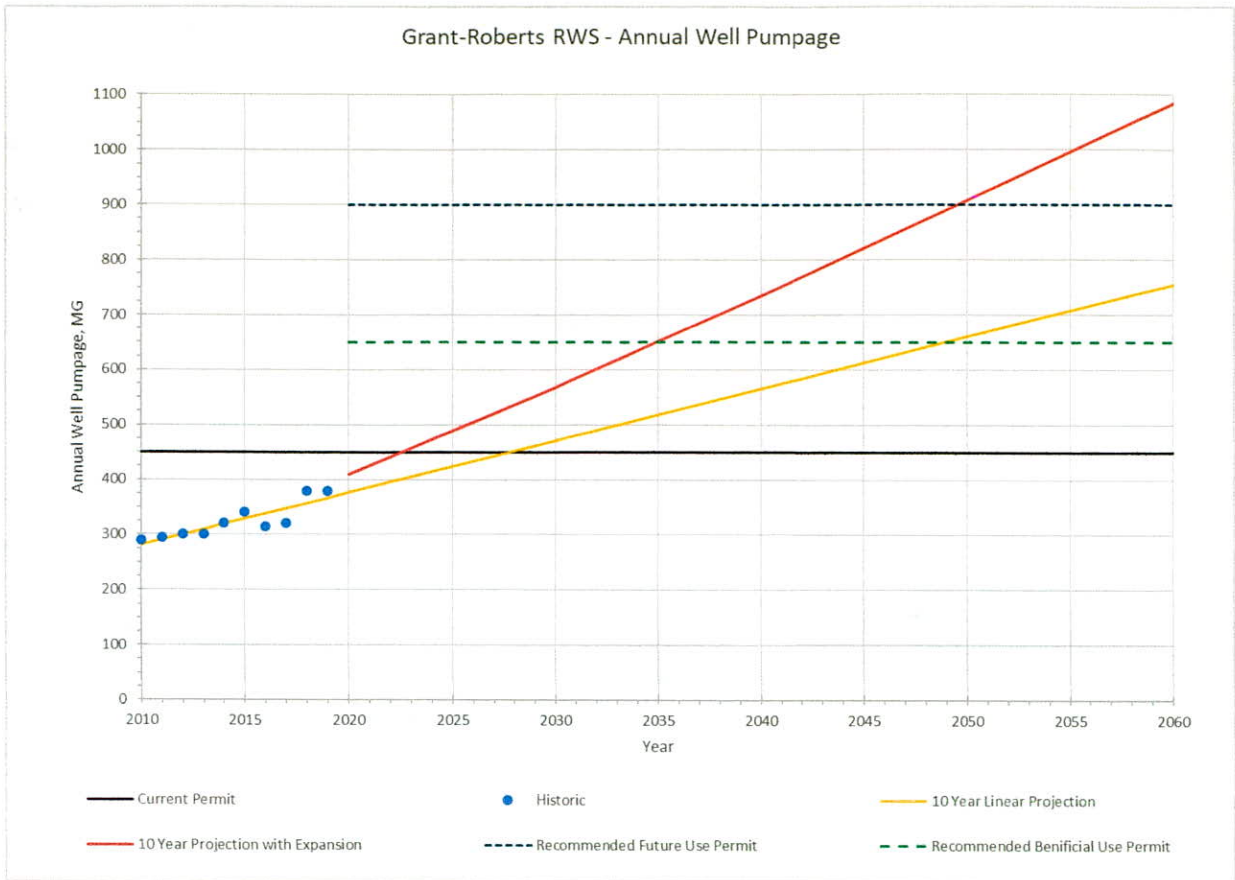


Figure 3. Recommendation for additional water right permits based on current trending patterns and expansion possibilities.

Notes:

1. The yellow "10 Year Linear Projection" line is based on the last 10 years of historic well pumpage.
2. The red "10 Year Projection with Expansion" line is based on the historic annual growth (2.6% annually) plus the additional expansion areas previously identified.

Recommendation:

1. DGR recommends obtaining an additional 200 MG (614 acft) in beneficial use permits. This would bring Grant-Roberts RWS's beneficial use annual appropriation to 650 MG.
2. DGR recommends obtaining an additional 250 MG (767 acft) in future use permits. This would bring Grant-Roberts RWS's total annual permits to 900 MG.

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date August 6, 2020

RECEIVED OF Grant-Roberts Rural Water System Inc. PO Box 145 Milbank SD 57252-0145

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

Fee for Application for Permit No. <u>8439-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$1150.00
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>8439-3</u>	\$200.00
Fee for Filing Transfer Form _____	\$
Fee for _____	\$
Fee for Issuing New Well Driller's License No. _____	\$
Fee for Renewal of Well Driller's License No. _____	\$
Fee for Issuing Well Pump Installer's License No. _____	\$
Fee for Renewal of Well Pump Installer's License No. _____	\$
(Any Other Work Provided by Law)	
TOTAL	\$1350.00

By Eric Gronlund
Chief Engineer

vm

Schlaak, Karen

From: Gronlund, Eric
Sent: Tuesday, July 28, 2020 11:30 AM
To: Schlaak, Karen
Subject: FW: [EXT] Grant-Roberts RWS - Water Rights

Karen – spoke with Nathan on the phone. I anticipate Grant-Roberts to file an application for an additional volume from their existing wells (no new wells at this time). I am not sure if they'll request additional diversion rate authority.

From: Nathan Brandenburg <nathan.brandenburg@dgr.com>
Sent: Tuesday, July 28, 2020 10:44 AM
To: Gronlund, Eric <Eric.Gronlund@state.sd.us>
Cc: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: RE: [EXT] Grant-Roberts RWS - Water Rights

Eric,

We are planning to get a permit submitted soon. I did have one last question about existing wells vs. new wells (Supplemental Information section). Grant-Robert's current wells have the capacity to provide the water we are planning to request as part of beneficial use. However we will need new wells once we need to get into future use appropriations. I guess my question is: as part of this permit, can we list the existing wells and no new construction? When the time comes and we need to convert future use to beneficial use we would need to identify new constructed wells on that new permit. Feel free to give me a call at any time if you would like to discuss rather than email.

Thanks,

Nathan A. Brandenburg, PE

DGR Engineering

From: Nathan Brandenburg
Sent: Wednesday, July 1, 2020 4:27 PM
To: 'Gronlund, Eric' <Eric.Gronlund@state.sd.us>
Cc: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: RE: Grant-Roberts RWS - Water Rights

Eric,

Thank you for the review. Everything you mention make sense and the answers to your questions are generally "yes". I am certain you will hear more official information from us soon.

Again, thank you for your help. Have a great 4th of July.

Nathan A. Brandenburg, PE

DGR Engineering

From: Gronlund, Eric <Eric.Gronlund@state.sd.us>
Sent: Wednesday, July 1, 2020 4:17 PM
To: Nathan Brandenburg <nathan.brandenburg@dgr.com>
Cc: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: RE: Grant-Roberts RWS - Water Rights

Nathan:

Grant-Roberts RWS currently holds Water Right No. 6654-3 and Water Permit No. 8321-3 which combined authorizes a maximum diversion rate of 3.56 cfs (1598 gpm) and an annual volume of 1,381 ac-ft of water. Based on the 10 year projection with expansion, the amount of additional beneficial use portion seems reasonable. My question is whether they plan for additional well(s) and if so an increase in the diversion/pump rate of 3.56 cfs. If so, the application should reflect that as well.

From a future use permitting aspect, Water Management Board rules states the Board may, at its discretion, limit future use permit to two times the annual amount actually put to beneficial use. They must show a contemplated future need. Again the amount stated below for future use seems reasonable given the current volume of water pumped and is within the guideline set forth in the rule.

Also looking at the hydrologic budget from last report in 2018 for Permit No. 8321-3 for Grant-Roberts the recharge to the Antelope Valley aquifer is 5,500 ac-ft/yr with the estimated average annual use plus future use reservation from the aquifer at 2,936 ac-ft/yr. So the budget looks okay for the water they'd be requesting. That is assuming they intend to use the same aquifer.

Finally, understand this is just a cursory look at the issue. Once a water permit or future use permit application is filed it will need to be thoroughly review by a staff engineer prior to a recommendation being made. What I am politely saying is get the permitting in place before getting too far down the road and making a investment in infrastructure only to find out there are permitting issues.

Hope this helps.

Eric

From: Nathan Brandenburg <nathan.brandenburg@dgr.com>
Sent: Wednesday, July 1, 2020 2:11 PM
To: Gronlund, Eric <Eric.Gronlund@state.sd.us>
Subject: [EXT] Grant-Roberts RWS - Water Rights

Good Afternoon Eric,

I am working with Grant-Roberts RWS and they have asked us to look into their water rights. They are considering expanding their system so we are working system improvements to allow for expansion. Our analysis showed that they currently have rights for approximately 1,381 acre/ft per year (450 MG per year). They have been consistently using more water and are within 85% of their water rights. We then made water use projections for the system with and without an expansion as shown on the figure below.

Obviously I am not giving you a lot of detail at this point, but I was wondering if you could provide us some insight. Please feel free to pass this along to anyone else in your office. We are recommending Grant-Roberts obtain an additional 200 MG (614 acft) in beneficial use permits. We also are recommending they obtain an additional 250 MG (767 acft) in future use permits. In total we are recommending they double their current permit application. Would this seem reasonable to the DENR?

Water Rights Program - File Documentation

NAME: Brent Hoffman

ADDRESS: Milbank SD

DATE: 10-19-20

RE: Pending applications

COMMENTS:

Called Brent Hoffman who stated the Grant-Roberts RWS serves the communities of South Shore, Stockholm, Strandburg, Wilmont, Twin Brooks, Big Stone City, Corona, Marvin in South Dakota.



Karen Schlaak
Water Rights Program



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8439-3, Grant-Roberts Rural Water System**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8439-3, Grant-Roberts Rural Water System, PO Box 145, Milbank SD 57252.

The Chief Engineer is recommending APPROVAL of Application No. 8439-3 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 Water Right No. 6654-3 and for use 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 Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Antelope Valley aquifer.
3. Water Right No. 6654-3, Water Permit No. 8321-3, and this Permit, combined, authorize a total annual diversion of 1,995 acre-feet of water.

See report on application for additional information.

Eric Gronlund
Eric Gronlund, Chief Engineer
October 16, 2020

Report to the Chief Engineer
On Water Permit Application No. 8439-3 and
Future Use Permit Application No. 8440-3
Grant-Roberts Rural Water System Inc c/o Brent Hoffman

October 16, 2020

Water Permit Application No. 8439-3 proposes to increase the diversion rate authority and annual volume authorized by Water Right No. 6654-3 and Water Permit No. 8321-3. If approved, the proposed diversion rate will be increased by 1.58 cubic feet of water per second (cfs) and the requested annual volume of water appropriated for the rural water system will be increased by 614 acre-feet per year. The diversion points are six existing wells authorized under Water Right No. 6654-3.

Water Right No. 6654-3, held by Grant-Roberts Rural Water System Inc, authorizes 1,074 acre-feet of water annually at a maximum instantaneous diversion rate of 3.56 cfs from six wells completed into the Antelope Valley aquifer and located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, and NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 10; all in T119N-R51W.

If approved, Water Permit Application No. 8439-3, Water Permit No. 8321-3 and Water Right No. 6654-3 will collectively authorize a maximum instantaneous diversion rate of 5.14 cfs and 1,995 acre-feet of water annually from the six existing wells for rural water system use. Grant-Roberts Rural Water System indicated the reasoning for requesting additional water is to provide water service to Corona, South Dakota and other communities in Grant and Roberts Counties in South Dakota, and to provide water service to rural customers in Lac Qui Parle and Big Stone Counties in Minnesota.

Future Use Permit Application No. 8440-3 proposes to appropriate and reserve 767 acre-feet of water annually from the Antelope Valley aquifer for the purpose of providing future water supplies to the rural water system. The location to be reserved for future water use is located in the N $\frac{1}{2}$, SE $\frac{1}{4}$ of Section 10 and W $\frac{1}{2}$ SW $\frac{1}{4}$ of Section 11; all in T119N-R51W. This application does not authorize the construction of works or the application of water to beneficial use.

Grant-Roberts Rural Water System serves users in Codington, Deuel, Grant and Roberts Counties in South Dakota and Lac Qui Parle and Big Stone Counties in Minnesota. The site of the existing well field and the area to be reserved for future use is located in Codington County approximately one mile north of South Shore, South Dakota.

AQUIFER: Antelope Valley (AV)

HYDROGEOLOGY:

The Antelope Valley aquifer is a glacial-outwash aquifer that is composed of very coarse sand to coarse gravel (Hansen, 1990 and 1994). Hedges and others (1982) estimated the areal extent and amount of recoverable water stored in the Antelope Valley aquifer (Table 1). Figure 1 displays the delineation of the Antelope Valley aquifer based on the study completed by Hedges and others (1982).

Table 1. Estimated areal extent and amount of recoverable water stored in the Antelope Valley aquifer (Hedges et al., 1982)

	Codington	Grant	Deuel	Total:
Areal Extent (acres)	6,800	14,500	7,400	28,700
Recoverable Water in Storage (acre-feet)	15,300	32,630	16,650	64,580

The Antelope Valley aquifer is located in the axis of the drainage divide between the Big Sioux and Minnesota Rivers and is hydrologically connected to numerous small lakes and sloughs that overlie or are directly adjacent to the aquifer (Hansen, 1990). The aquifer is generally under unconfined conditions; however, there are locations where the aquifer is buried under up to 50 feet of till (including the site of interest for these applications) where it is generally under confined conditions (Hansen, 1990; SDGS, 2020; Water Rights, 2020d). The direction of groundwater movement in the Antelope Valley aquifer is generally from the northwest to the southeast (Hansen, 1990). In Grant and Codington Counties, the depth to the top of aquifer materials ranges from land surface to 57 feet below grade (Hansen, 1990). The average thickness of Antelope Valley aquifer materials is 34 feet with a documented maximum thickness of 52 feet (Hansen, 1990).

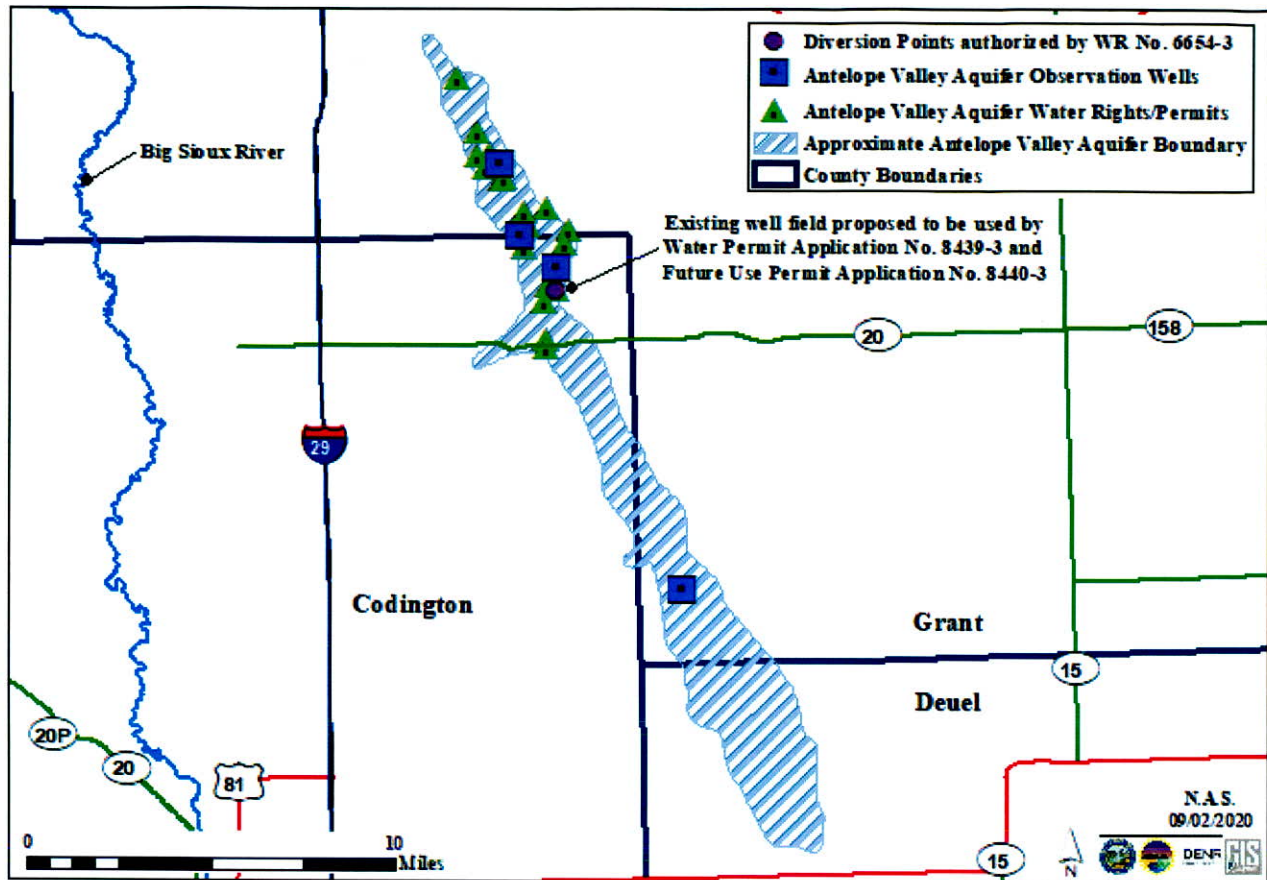


Figure 1. Map of the approximate Antelope Valley aquifer boundary (modified from Hedges et al., 1982) with the current water rights/permits authorized to appropriate water from the Antelope Valley aquifer (Water Rights, 2020c), Antelope Valley aquifer observation wells (Water Rights, 2020b), and the diversion points authorized by Water Right No. 6654-3 (Water Rights, 2020c)

Applicable South Dakota Codified Laws (SDCL)

Pursuant to SDCL 46-2A-9, “A permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant’s proposed use, that the diversion point can be developed without unlawful impairment of existing rights, and that the proposed use is a beneficial use and in the public interest.” This report will address the availability of unappropriated water and the potential for unlawful impairment of existing water rights within the Antelope Valley aquifer for Water Permit Application No. 8439-3.

Pursuant to SDCL 46-2A-10, “A reservation for a future use may be approved only if there is a reasonable probability that unappropriated water is available for appropriation, that the quantity of water reserved will be needed by the entity and that the proposed use will be a beneficial use and in the public interest.” The Water Management Board has consistently found that the use of water for a rural water system is a beneficial use and in the public interest. This report will address the availability of unappropriated water within the Antelope Valley aquifer for Future Use Permit Application No. 8440-3, and if the quantity of water to be reserved for future use will be needed by Grant-Roberts Rural Water System.

Pursuant to SDCL 46-5-38, an entity that may reserve water for contemplated future needs upon a showing of availability of unappropriated water and future need pursuant to procedures set forth in chapter 46-2A. Grant-Roberts Rural Water System is an entity that may reserve water for future use pursuant to SDCL 46-5-38 (5). Grant-Roberts Rural Water System has indicated their system is projecting growth and the rural water system has a desire to expand. Additionally, Grant-Roberts Rural Water System had DGR Engineering complete a summary of the rural water system's water rights/permits and their annual usage from 2013 to 2017. Using a 10-year linear projection method, in order to expand, DGR Engineering estimated Grant-Roberts Rural Water System needs an additional 614 acre-feet in beneficial use permits, and an additional 767 acre-feet of water reserved for future use.

WATER AVAILABILITY:

Water Permit Application No. 8439-3 and Future Use Permit Application No. 8440-3 propose to appropriate and reserve water from the Antelope Valley aquifer. The probability of unappropriated water being available from the 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 groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems." The Antelope Valley aquifer is not older than or stratigraphically lower than the Greenhorn Formation, even though the applicant's proposed use is for a water distribution system. Therefore, the average annual recharge and average annual withdrawal rates to and from the Antelope Valley aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the Antelope Valley aquifer is through direct infiltration and subsequent percolation of rainfall and snowmelt where the aquifer is near or at land surface (Hansen, 1990). Using observation well analysis, Hedges and others (1985) estimated a recharge rate of 2.3 inches per year to the Antelope Valley aquifer. The Antelope Valley aquifer has an estimated areal extent of approximately 28,700 acres (Hedges et al., 1982); therefore, the estimated average annual recharge rate (based on Hedges et al., 1982 and 1985) is approximately 5,500 acre-feet per year. The observation well analysis method used by Hedges and others (1985) assumed a rise in water level in the aquifer as the only product of recharge to the aquifer. A rise in water level in the aquifer is the result of recharge to the aquifer exceeding discharge from the aquifer, indicating the observation well analysis method may be conservative when estimating a recharge rate because it does not necessarily account for recharge that occurs when discharge from the aquifer exceeds recharge.

Discharge

Discharge from the Antelope Valley aquifer is through well withdrawals and evaporation where the aquifer is near or at land surface. Additional discharge from the aquifer is through outflow to hydraulically connected lakes and sloughs, including Punished Woman's, Round and Crooked Lakes (Hansen, 1990).

Currently, there are 18 water rights/permits authorized to appropriate water from Antelope Valley aquifer (Water Rights, 2020c). Additionally, there are two future use permits (Nos. 4053-3 and 4053B-3 for the Town of South Shore) reserving 192 acre-feet of water annually from the Antelope Valley aquifer (Water Rights, 2020c).

Table 1 summarizes the 4 non-irrigation water rights/permits authorized to withdraw water from the Antelope Valley aquifer with their limiting appropriation or diversion rate and estimated annual use. The amount of water that can be withdrawn was estimated by assuming the non-irrigation water rights/permits limited by an annual volume will withdraw their entire appropriated volume every year. It is estimated that the non-irrigation water rights/permits limited only by a diversion rate are estimated to pump at their maximum permitted diversion rate for 60 percent of the time.

Table 1. Summary of the limiting appropriation or diversion rate, and estimated use for the non-irrigation water rights/permits authorized to withdraw water from the Antelope Valley aquifer (Water Rights, 2020c)

Permit No.	Name	Status	Use	Rate (cfs)	Estimation Method	Estimated Use (acre-feet/year)
4053A-3	Town of South Shore	LC	MUN	0.58	60% Pumping	251.95
5520-3	Town of South Shore	LC	MUN	0.09	60% Pumping	39.1
6654-3	Grant-Roberts RWS Inc	LC	RWS	0.89	Volume	1074
8321-3	Grant-Roberts RWS	PE	RWS		Volume	307
					Total:	1,672.1
LC: Licensed Water Right, PE: Water Permit, MUN: Municipal, RWS: Rural Water System						

Grant-Roberts Rural Water System currently holds Water Right No. 6654-3 and Water Permit No. 8321-3 and is required to annually report the volume of water pumped from the Antelope Valley aquifer (Water Rights, 2020c). The reported historic annual use from the Grant-Roberts Rural Water System over the period of record (2003 to 2019) on file with the DENR - Water Rights Program is listed in Table 2 (Water Rights, 2020e). It is worth noting that the Grant-Roberts Rural Water System, on average, uses less than their appropriated volume each year; therefore, the estimated use calculated in Table 1 should be considered a higher withdrawal rate than what actually is actually being withdrawn each year from the Antelope Valley aquifer from the non-irrigation water rights/permits.

Table 2. Reported historic use from the Grant-Roberts Rural Water System rights/permits (Water Rights, 2020e)

Year (Grant-Roberts RWS Rights/Permits authorized at that time)	Allowed (acre-feet/year)	Reported (acre-feet/year)
2003 (5576-3, 5576A-3)	1,074	761
2004 (5576-3, 5576A-3, 6654-3)	1,074	874
2005 (5576-3, 5576A-3, 6654-3)	1,074	645
2006 (5576-3, 5576A-3, 6654-3)	1,074	835
2007 (5576-3, 5576A-3, 6654-3)	1,074	875
2008 (5576-3, 5576A-3, 6654-3)	1,074	890
2009 (5576-3, 5576A-3, 6654-3)	1,074	874
2010 (5576-3, 5576A-3, 6654-3)	1,074	881
2011 (5576-3, 5576A-3, 6654-3)	1,074	844
2012 (5576-3, 5576A-3, 6654-3)	1,074	887
2013 (5576-3, 5576A-3, 6654-3)	1,074	920
2014 (5576-3, 5576A-3, 6654-3)	1,074	963
2015 (5576-3, 5576A-3, 6654-3)	1,074	1,043
2016 (5576-3, 5576A-3, 6654-3)	1,074	967
2017 (5576-3, 5576A-3, 6654-3)	1,074	983
2018 (6654-3, 8321-3)	1,381	1,154
2019 (6654-3, 8321-3)	1,381	1,183
Average:		916.4

There are domestic wells completed into the Antelope Valley aquifer that do not require a water right/permit, so the withdrawal amount is unknown (Water Rights, 2020d). Due to their relatively low diversion rates, withdrawals from domestic wells are not considered to be a significant portion of the hydrologic budget. Additionally, with the development of rural water systems in areas where the Antelope Valley aquifer is the uppermost aquifer available, domestic users may have transitioned to rural water. Therefore, the quantity of water withdrawn annually by domestic wells is estimated to be negligible to the hydrologic budget of the Antelope Valley aquifer.

There are 14 water rights/permits currently authorized to appropriate water from the Antelope Valley aquifer for irrigation use (Water Rights, 2020c). Generally, irrigation water rights/permits are required to report their annual water usage. The average annual withdrawal rate for irrigation appropriations over the period of record (1979-2019) is approximately 1,066.5 acre-feet per year (Table 3) (Water Rights, 2020a). To more accurately reflect the current development of irrigation water rights/permits, the average annual withdrawal rate for irrigation appropriations from 2010 to 2019 is calculated to be approximately 1,284.6 acre-feet per year (Table 3) (Water Rights, 2020a).

Table 3. Reported historic irrigation use from the Antelope Valley aquifer (Water Rights, 2020a)

Year	No. of Permits	Annual Appropriation (acre-feet)	Reported Pumpage (acre-feet)
1979	7	4,735	73
1980	8	4,881	435
1981	7	4,881	513
1982	5	4,194	60.8
1983	6	5,276.1	542.8
1984	6	5,106.1	136
1985	6	5,106.1	49
1986	6	5,106.1	41
1987	6	4,866.1	645
1988	7	4,914.1	1,826.8
1989	7	4,096	1,427
1990	10	4,466	1,606
1991	12	5,927	988.5
1992	11	5,917	650
1993	11	5,917	310
1994	10	5,698	699.5
1995	10	5,698	469.3
1996	8	4,198	1092.3
1997	8	3,925	932
1998	9	5,425	1,136.3
1999	9	5,425	1,378.8
2000	9	5,425	1,608.2
2001	9	5,425	1,808.9
2002	9	5,425	1,533.7
2003	9	5,425	2,000.7
2004	9	5,425	1,595.9
2005	9	5,425	1,740.3
2006	9	5,425	1,937.3
2007	9	5,425	1,299.3
2008	9	4,727	989.3
2009	9	5,147	1281.3
2010	10	5,257	1419.2
2011	10	5,257	886.7
2012	10	5,257	2163.5
2013	12	5,547	2003.0
2014	14	6,114.6	748.9
2015	14	6,114.6	569.6
2016	14	6,114.6	2,019.1
2017	14	6,114.6	1,404.8
2018	14	6,114.6	1,403.3
2019	14	6,114.6	227.7
Min	5	3,925	41
Max	14	6,114.6	2,163.5
Avg (1979 to 2019)	9.4	5,280.9	1,066.5
Avg (2010 to 2019)	12.6	5,800.60	1,284.60

Hydrologic Budget Summary

The average annual recharge rate to the Antelope Valley aquifer is approximately 5,500 acre-feet per year (Hedges and others, 1982 and 1985). The average annual withdrawal rate from the Antelope Valley aquifer totals approximately 4,529.7 acre-feet per year: (1,672.1 acre-feet/year for non-irrigation; 1,284.6 acre-feet/year for irrigation (2010 to 2019); 192 acre-feet/year for current future use permits; 614 acre-feet/year for Water Permit Application No. 8439-3 (if approved); and 767 acre-feet/year for Future Use Permit Application No. 8440-3 (if approved)). The average annual withdrawal rate from the Antelope Valley aquifer is expected to be lower than 4,529.7 acre-feet/year based on the reported historic annual use from the Grant-Roberts Rural Water System. Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the Antelope Valley aquifer for the proposed appropriations.

OBSERVATION WELL DATA:

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

The DENR – Water Rights Program monitors four observation wells completed into the Antelope Valley aquifer (Water Rights, 2020b). These observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The observation wells and their approximate distances to the existing well field are GT-76D (3.5 miles northwest), GT-77G (1.5 miles northwest), CD-76G (0.65 miles north-northeast) and GT-81A (9 miles southeast) (as shown in Figure 1) (Water Rights, 2020b and 2020c). The hydrographs for these observation wells are displayed in Figure 2 (Water Rights, 2020b). Hydrographs were constructed with data points that are measurements of the static water level in the observation wells adjusted to be the elevation from the ground surface instead the measured depth below top of the well casing.

Observation well CD-76G is under confined aquifer conditions and is the closest well to the existing well field authorized by Water Right No. 6654-3 (SDGS, 2020; Water Rights, 2020b and 2020c). The water levels on the hydrograph for observation well CD-76G show the response to pumping from irrigation with water levels returning to a generally stable trend preceding each irrigation season over the respective period of record. The water level fluctuation in CD-76G does not represent a reduction in recoverable water stored in the Antelope Valley aquifer nor does it represent average annual withdrawals exceeding average annual recharge for the aquifer. Rather, the hydrograph for CD-76G indicates the aquifer in this area is equilibrating in response to the increase in pumping over the respective period of record. Observation wells GT-76D, GT-77G and GT-81A are under unconfined aquifer conditions and do not show identifiable effects from pumping on their respective hydrographs (SDGS, 2020; Water Rights, 2020b). This is likely due to the unconfined nature of the Antelope Valley aquifer since the drawdown from a pumping well generally does not extend far from that well. The water levels on the hydrographs for the observation wells GT-76D, GT-77G and GT-81A display stable to increasing water levels

over their respective period of record, and since these wells are under unconfined conditions, the stable to increasing water levels are directly reflective of water storage in the aquifer being stable to increasing over the period of record. The effects of climatic conditions are clear on the hydrographs because water levels are rising during wetter periods (early spring snowmelt and precipitation) and slowly declining to a stable water level during drier periods. The hydrographs show the aquifer consistently recovering after an irrigation season is finished and the stable to rising water levels in the observation wells shows the aquifer is not being stressed by pumping. Aquifer recovery indicates that climatic conditions and therefore, natural recharge to and natural discharge from the aquifer, dominate changes in water level to the Antelope Valley aquifer rather than pumping. That means recharge to and natural discharge from the aquifer greatly exceed withdrawals. By recognizing that both recharge to and natural discharge from an aquifer can be captured for pumping, the observation well hydrographs demonstrate there is a reasonably probability unappropriated water is available for the proposed appropriations.

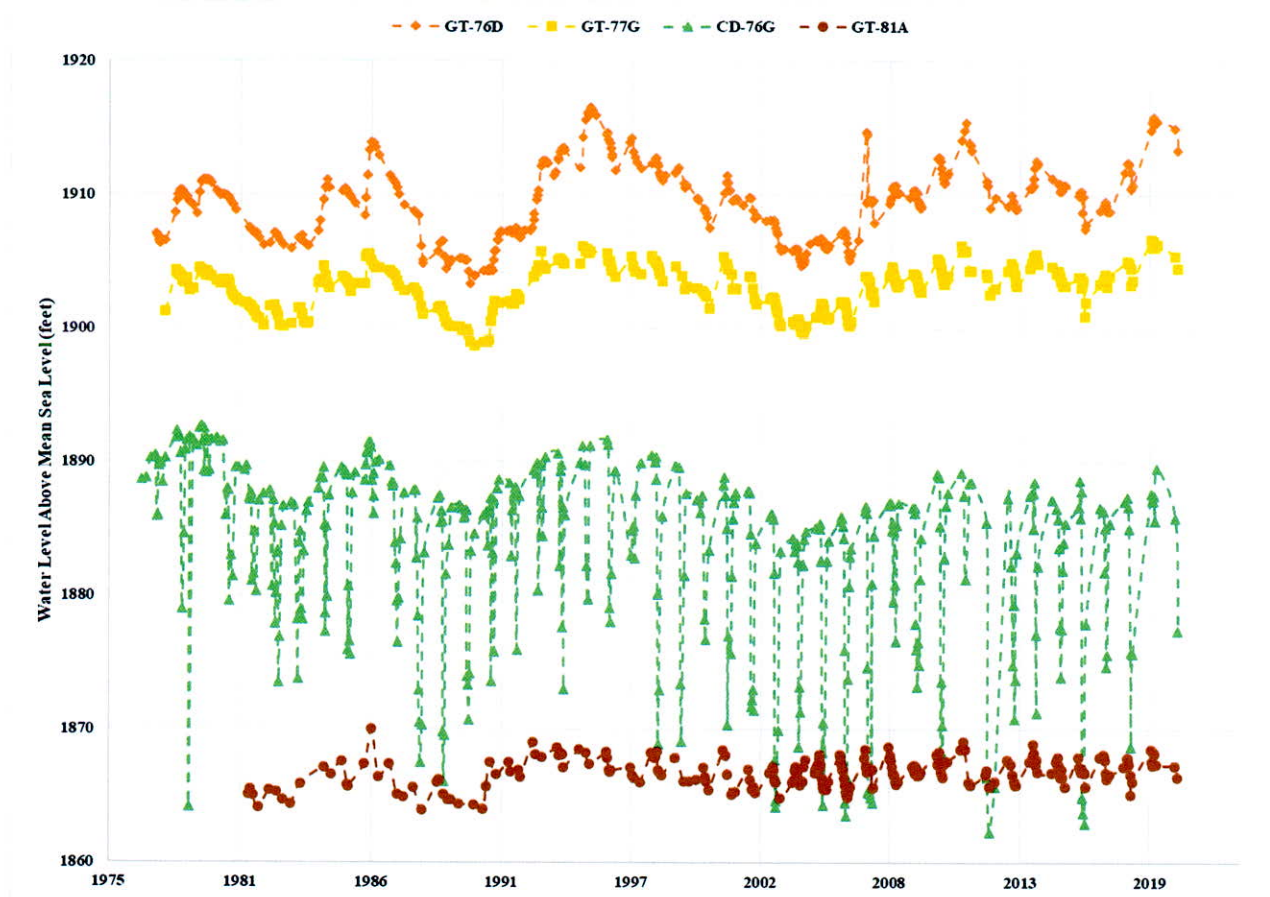


Figure 2. Hydrographs for observation wells GT-76D (ground surface elevation: 1,927 ft), GT-77G (ground surface elevation: 1,916 ft), MP-80D (ground surface elevation: 1,910 ft), CD-76G (ground surface elevation: 1,897 ft) and GT-81A (ground surface elevation: 1,870 ft) (SDGS, 2020; Water Rights, 2020b)

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are 18 water rights/permits authorized to appropriate water from Antelope Valley aquifer (Water Rights, 2020c). The closest water right/permit to the existing well field is Water Right No. 3672-3, held by Coast Properties Investors LLC, which is located approximately 0.6 miles south of the existing well field (Table 4) (Figure 4) (Water Rights, 2020c).

There are domestic wells on file with the DENR-Water Rights Program that are completed into the Antelope Valley aquifer, with the closest domestic well on file (not held by the applicant) approximately 1.5 miles northwest of the existing well field (Water Rights, 2020d). It is possible there are other domestic wells completed into the Antelope Valley aquifer near the existing well field that are not on file with the DENR-Water Rights Program.

The Antelope Valley aquifer is under confined conditions at the applicant's proposed diversion points based on the well completion reports on file with Water Right No. 6654-3 and the lithologic logs on file for nearby Antelope Valley observation wells (SDGS, 2020; Water Rights, 2020b, 2020c and 2020d). Since the Antelope Valley aquifer is expected to be confined at the existing well field, drawdown from pumping can extend some distance but the exact drawdown behavior of a well cannot be known without an aquifer performance test. Observation well CD-76G (approximately 0.65 miles north-northeast of the existing well field) has 8 high-yield irrigation wells within approximately 1.0 mile of it (Water Rights, 2020b and 2020c). The drawdown from pumping can be seen on the hydrograph for CD-76G, along with the aquifer returning to pre-pumping conditions between irrigation seasons (Figure 3) (Water Rights, 2020b). The lithologic log on file for CD-76G noted the top of aquifer materials are approximately 57 feet below grade (SDGS, 2020). The lowest recorded static water level on the hydrograph is approximately 37.9 feet below grade, which indicates there was still approximately 19 feet of artesian head pressure in CD-76G even during a drier period when irrigation wells are expected to be pumping more water (Water Rights, 2020b).

In Codington County at the applicant's existing well field, the Antelope Valley aquifer has an average saturated thickness of approximately 34 feet with the depth to top of aquifer materials approximately 50 feet below grade according to the well completion reports on file with Water Right No. 6654-3 (Hanson, 1990; Water Rights, 2020c and 2020d). This would allow for enough thickness for a pump to be placed 20 feet below the top of the aquifer, which is required for the well to be considered adequate under ARSD Section 74:02:04:20 (6). Any drawdown as a result of the diversion for these applications is not expected to unlawfully impair nearby adequate wells. In Codington and Grant Counties, there are no complaints on file with the DENR-Water Rights Program regarding well interference for adequate wells completed into the Antelope Valley aquifer (Water Rights, 2020f).

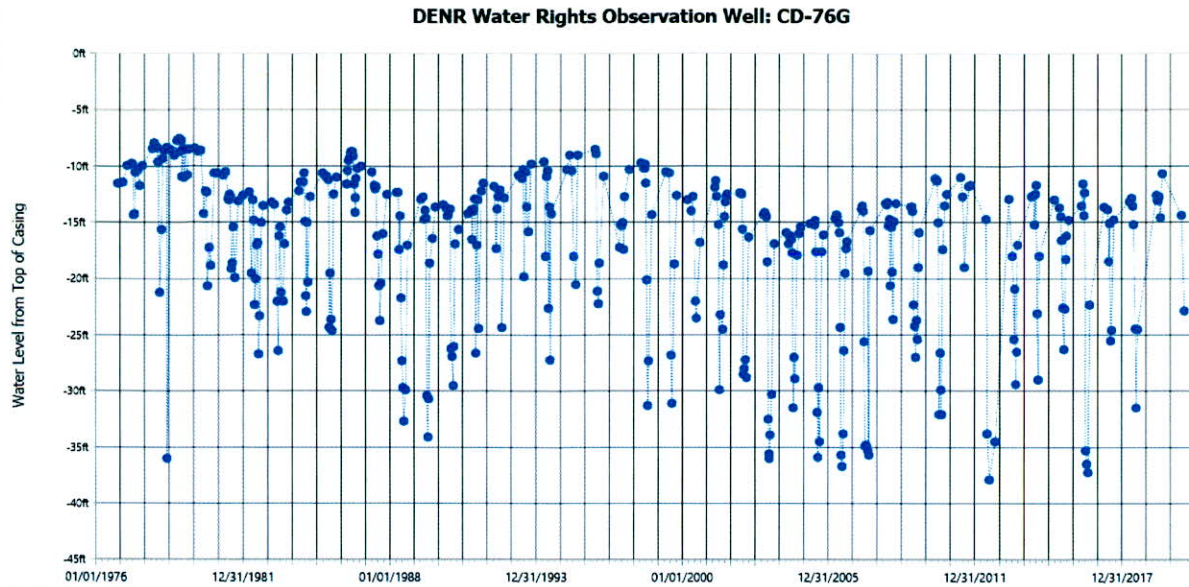


Figure 3. Hydrograph for observation well CD-76G (Water Rights, 2020b)

Table 4. Water rights/permits authorized to withdraw water from the Antelope Valley aquifer as shown in Figure 4 (Water Rights, 2020c)

Permit No.	Name	Status	Use	Diversion Rate (cfs)	Appropriated Volume (acre-feet/year)
2333-3	Joe & John Arthur	LC	IRR	4	
2478-3	Joe & John Arthur	LC	IRR	1.07	
3672-3	Coast Properties Investors LLC	LC	IRR	1.78	
3781-3	Joe & John Arthur	LC	IRR	3.75	
4053A-3	Town of South Shore	LC	MUN	0.58	
5382-3	Joe & John Arthur	PE	IRR	3.14	
5520-3	Town of South Shore	LC	MUN	0.09	
6654-3	Grant-Roberts RWS Inc	LC	RWS	3.56	1,074
7975-3	Jim and Dan Thyen	PE	IRR	1.89	
8321-3	Grant-Roberts RWS Inc	PE	RWS		307

LC: Licensed Water Right, PE: Water Permit, IRR: Irrigation, MUN: Municipal, RWS: Rural Water System

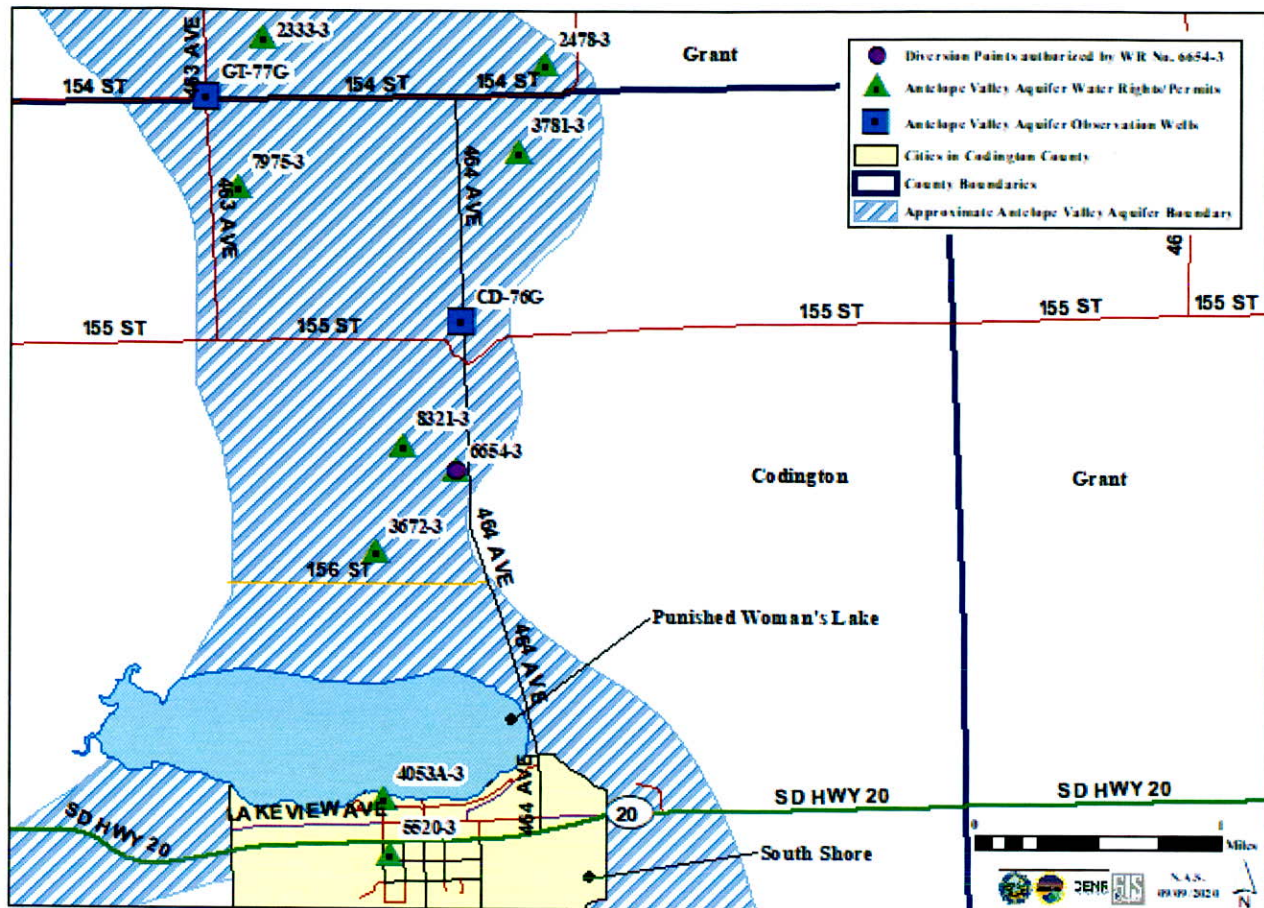


Figure 4. Location of the diversion points authorized by Water Right No. 6654-3 with nearby Antelope Valley aquifer water rights/permits and observation wells (Water Rights, 2020b and 2020c)

The Water Management Board recognizes that putting water to beneficial use requires a certain amount of drawdown to occur. The Board has developed rules to allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The Water Management Board defined an “adversely impacted domestic well” in ARSD Section 74:02:04:20(7) as:

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

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use during the issuance of Water Right 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Board adopted Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, “general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable...” (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered as an unlawful impairment, it would also conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to install or lower pumps depending on the specific characteristics of the Antelope Valley aquifer at their location. However, when considering the statutes (SDCL 46-1-4 and 46-6-6.1) and ARSD Section 74:02:04:20 (6) and (7), the estimated thickness of the Antelope Valley aquifer at the applicant’s existing well field, and the lack of well interference complaints, any drawdown created from the proposed diversion is not expected to cause an unlawful impairment on existing water rights/permits or domestic users with adequate wells. Therefore, there is a reasonable probability that any interference from the proposed appropriations will not impose unlawful impairments on existing users with adequate wells.

ARSD Section 74:02:01:24.01

ARSD Section 74:02:01:24.01 states, “Future use applications and future use permits for entities without permits to use water shall be limited to the amount of water actually needed to cover the uses specified in the future use application or future use permit. The board may, at its discretion, limit future use applications and future use permits for entities with permits to use water to two times the annual amount actually put to beneficial use.” A study completed by DRG Engineering on the historic usage and the projected growth for Grant-Roberts Rural Water System was submitted with Water Permit Application No. 8439-3 and Future Use Permit Application No. 8440-3. A summary of the current Grant-Roberts Rural Water System water rights/permits and annual usage (based off data from 2013 to 2017) for Grant-Roberts Rural Water System, as well as a 10-year projection of annual use with and without expansion was provided. Since Grant-Roberts Rural Water System has had future use permits in the past and has requested a volume of water less than the average reported volume over the period of record (2003 to 2019), it is reasonable to approve Future Use Permit Application No. 8440-3.

CONCLUSIONS:

1. Water Permit Application No. 8439-3 proposes to increase the diversion rate authority and annual volume authorized by Water Right No. 6654-3 and Water Right No. 8321-3. If approved, the proposed diversion rate will be increased by 1.58 cubic feet of water per second (cfs) and the requested annual volume of water appropriated will be increased by 614 acre-feet per year.
2. Water Right No. 6654-3 authorizes 1,074 acre-feet of water annually at a maximum instantaneous diversion rate of 3.56 cfs from 6 wells completed into the Antelope Valley aquifer. If approved, Water Permit Application No. 8439-3, Water Right No. 8321-3 and Water Right No. 6654-3 will collectively authorize a maximum instantaneous diversion rate of 5.14 cfs and 1,995 acre-feet of water annually.
3. Future Use Permit Application No. 8440-3 proposes to appropriate and reserve 767 acre-feet of water annually from the Antelope Valley aquifer for the purpose of providing future water supplies to the rural water system.
4. Grant-Roberts Rural Water System serves users in Codington, Deuel, Grant and Roberts Counties in South Dakota and Lac Qui Parle and Big Stone Counties in Minnesota. The site of the existing well field and the area to be reserved for future use is located in Codington County approximately one mile north of South Shore, South Dakota.
5. Based on the hydrologic budget and observation well data, there is a reasonable probability that unappropriated water is available from the Antelope Valley aquifer to supply the proposed appropriations.
6. There is a reasonable probability that the increased diversion rate authority and annual volume proposed by Water Permit Application No. 8439-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic users.


Nakaila Steen
Natural Resources Engineer I
SD DENR - Water Rights Program

Reviewed by:


Adam Mathiowetz, PE
Natural Resources Engineer III
SD DENR - Water Rights Program

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- Water Rights, 2020c. Water Right/Permit Files, SD-DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2020d. Well Completion Reports, SD-DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2020e. "2003-2019 Non-Irrigation Yearly Reports", SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2020f. County Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, October 19, 2020 10:10 AM
To: Brent Hoffmann (rwater1981@tnics.com)
Cc: Nathan Brandenburg
Subject: Water Permit Application Nos. 4439-3 and 4440-3
Attachments: 0089.pdf

Attached is a copy of the report, chief engineer recommendations and information regarding the public notice for your water permit applications. As stated in the letter, please contact the 4 papers as soon as possible to authorize publication and arrange for payment. This information is being mailed to you today.

Karen Schlaak

Water Rights Program
(605) 773-3352



DENR
SOUTH DAKOTA

Affidavit of Publication

STATE OF SOUTH DAKOTA } ss.
County of Roberts

Kevin H. Deutsch of said county, being first duly sworn, on oath says, that he is Editor of THE SISSETON COURIER, a weekly newspaper printed and published in Sisseton, in said county of Roberts, 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 52 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 Notice of Notice of Application-Nos. 8439-3 And 8440-3, 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 in each week for one successive weeks, on the day of each week on which said newspaper was regularly published, to-wit:

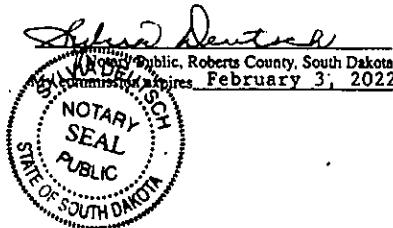
Oct. 27, 2020 _____

that the full amount of the fee is charged for publication of said Notice insures to the benefit of the publisher of said newspaper; that no agreement or understanding for the division there has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever and that the fees charged for the publication there of are \$36.56

Kevin H. Deutsch

Subscribed and sworn to before me this 27th day of

October, A.D. 2020



NOTICE OF APPLICATION NOS. 8439-3 AND 8440-3

Notice is given that Grant Roberts Rural Water System Inc., c/o Brent Hoffmann, PO Box 145, Milbank SD 57252 has filed the following water permit and future use permit applications. Application No. 8439-3 proposes to increase the diversion rate and annual volume authorized by Water Right No. 6654-3 and Water Permit No. 8321-3. Water Right No. 6654-3 authorizes 1,074 acre-feet of water annually at a maximum pump rate of 3.56 cubic feet of water per second (cfs) from six wells completed into the Antelope Valley Aquifer located in the NE 1/4 SE 1/4, S 1/2 NE 1/4, NE 1/4 NW 1/4 Section 10-T119N-R51W. Water Permit No. 8321-3 authorizes an additional 307 acre-feet of water from the six wells authorized by No. 6654-3 for a combined total of 1,381 acre-feet. This application is requesting an additional 1.58 cfs and an additional 614 acre-feet of annual volume from the six existing wells described above. This application, if approved, Water Permit No. 8321-3, and Water Right No. 6654-3 combined would authorize a total of 5.14 cfs and 1,995 acre-feet of water annually from the six existing wells for rural water system use.

Application No. 8440-3 requests to appropriate and reserve for future use 767 acre-feet annually from the Antelope Valley Aquifer. The area to be reserved for future water use is located in the N 1/2, SE 1/4 Section 10 and W 1/2 SW 1/4 Section 11; all in

T119N-R51W. The water is to be reserved for future water supplies for the rural water system. This application does not authorize construction of works or application of water to beneficial use.

The rural water system serves users in Codington, Grant, Roberts and Deuel Counties in South Dakota and Lac Qui Parle and Big Stone Counties in Minnesota. In South Dakota this includes the communities of South Shore, Stockholm, Strundburg, Wilnot, Twin Brooks, Big Stone City, Corone and Marvin. The site of the existing well field and the area to be reserved for future use is located one mile north of South Shore SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8439-3 and 8440-3 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 recommendations with qualifications, the applications, and staff report are available at <http://derrsd.gov/> public or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting the applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. 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 November 9, 2020.

The petition may be informal but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, 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 recommendations of the Chief Engineer and no petition to oppose the applications is received, the Chief Engineer shall act on the applications pursuant to the recommendations with no hearing held before the Water Management Board. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled, and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at the total approximate cost of \$36.56.

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA
COUNTY OF DEUEL

Ken Reiste being first duly sworn, on oath says: That he is publisher of the Clear Lake Courier, a weekly newspaper published in the City of Clear Lake, Deuel County, South Dakota; that he has full and personal knowledge of all facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Deuel and State of South Dakota, for at least one year next prior to the first publication of the attached public notice, and that

Grant-Robert Rural Water System
Notice Of Application
Nos 8439 and 8440-3

a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for one successive week(s) to wit:

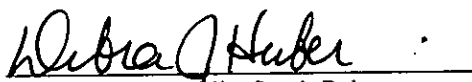
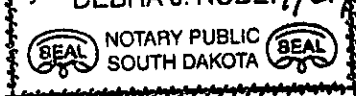
October 21, 2020

That the full amount of the fee charged for publication of the attached public notice insures to the sole benefit of the publisher; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are \$45.59


Ken Reiste

Subscribed and sworn to before me

this 23 day of October
2020


Notary Public, South Dakota
My commission expires 9/21/2021


Public notice

NOTICE OF APPLICATION

NOS. 8439-3 and 8440-3

Notice is given that Grant-Roberts Rural Water System Inc., c/o Brent Hoffmann, PO Box 145, Milbank SD 57252 has filed the following water permit and future use permit applications. Application No. 8439-3 proposes to increase the diversion rate and annual volume authorized by Water Right No. 6654-3 and Water Permit No. 8321-3. Water Right No. 6654-3 authorizes 1,074 acre-feet of water annually at a maximum pump rate of 3.56 cubic feet of water per second (cfs) from six wells completed into the Antelope Valley Aquifer located in the NE 1/4 SE 1/4, S 1/2 NE 1/4, NE 1/4 NW 1/4 Section 10-T119N-R51W. Water Permit No. 8321-3 authorizes an additional 307 acre-feet of water from the six wells authorized by No. 6654-3 for a combined total of 1,381 acre-feet. This application is requesting an additional 1.58 cfs and an additional 614 acre-feet of annual volume from the six existing wells described above. This application, if approved, Water Permit No. 8321-3, and Water Right No. 6654-3 combined would authorize a total of 5.14 cfs and 1,995 acre-feet of water annually from the six existing wells for rural water system use.

Application No. 8440-3 requests to appropriate and reserve for future use 767 acre-feet annually from the Antelope Valley Aquifer. The area to be reserved for future water use is located in the N 1/2, SE 1/4 Section 10 and W 1/2 SW 1/4 Section 11; all in T119N-R51W. The water is to be reserved for future water supplies for the rural water system. This application does not authorize construction of works or application of water to beneficial use.

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Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8439-3 and 8440-3 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 recommendations with qualifications, the applications, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting the applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's

recommendations. 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 November 9, 2020.

The petition may be informal but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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Published once at the total approximate cost of \$45.59 (36-1/126)

RECEIVED

OCT 26 2020

WATER RIGHTS
PROGRAM

RECEIVED

NOV 02 2020

WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)

County of Codington) SSI, Jackie Wettestadcertify that the attached printed Notice was
takenfrom the WatertownPublic Opinionprinted and published in WatertownCounty of Codington andstate of South Dakota. The notice was
published

in the newspaper on the following date:

October 28, 2020Cost of Printing \$64.30Jackie Wettestad
(Signature)Office Manager
(Title)10-28-2020
(Date Signed)DENR WATER
RIGHTS PROGRAMNOTICE OF APPLICATION NOS. 8439-3
and 8440-3

Notice is given that Grant-Roberts Rural Water System Inc., c/o Brent Hoffmann, PO Box 145, Milbank SD 57252 has filed the following water permit and future use permit applications. Application No. 8439-3 proposes to increase the diversion rate and annual volume authorized by Water Right No. 6654-3 and Water Permit No. 8321-3. Water Right No. 6654-3 authorizes 1,074 acre-feet of water annually at a maximum pump rate of 3.56 cubic feet of water per second (cfs) from six wells completed into the Antelope Valley Aquifer located in the NE 1/4 SE 1/4, S 1/2 NE 1/4, NE 1/4 NW 1/4 Section 10-T119N-R51W. Water Permit No. 8321-3 authorizes an additional 307 acre-feet of water from the six wells authorized by No. 6654-3 for a combined total of 1,381 acre-feet. This application is requesting an additional 1.58 cfs and an additional 614 acre-feet of annual volume from the six existing wells described above. This application, if approved, Water Permit No. 8321-3, and Water Right No. 6654-3 combined would authorize a total of 5.14 cfs and 1,995 acre-feet of water annually from the six existing wells for rural water system use. Application No. 8440-3 requests to appropriate and reserve for future use 767 acre-feet annually from the Antelope Valley Aquifer. The area to be reserved for future water use is located in the N 1/2, SE 1/4 Section 10 and W 1/2 SW 1/4 Section 11; all in T119N-R51W. The water is to be reserved for future water supplies for the rural water system. This application does not authorize construction of works or application of water to beneficial use. The rural water system serves users in Codington, Grant, Roberts and Deuel Counties in South Dakota and Lac Qui Parle and Big Stone Counties in Minnesota. In South Dakota this includes the communities of South Shore, Stockholm, Strandburg, Wilmot, Twin Brooks, Big Stone City, Corona and Marvin. The site of the existing well field and the area to be reserved for future use is located one mile north of South Shore SD. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8439-3 and 8440-3 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 recommendations with qualifications, the applications, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below. Any person interested in opposing or supporting the applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. 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 November 9, 2020. The petition may be informal but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, 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 recommendations of the Chief Engineer and no petition to oppose the applications is received, the Chief Engineer shall act on the applications pursuant to the recommendations with no hearing held before the Water Management Board. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled, and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition. Published once at the approximate cost of \$59.30.

64.30
(October 28, 2020)

Printer's Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF GRANT

} ss.

Ashlie Schweitzer

of said County and State, being first duly sworn, on oath says that the Grant County Review is a legal weekly newspaper of general circulation, printed and published in Milbank, in said County of Grant and State of South Dakota, by Grant County Review, Inc., and has been such newspaper during the times hereinafter mentioned; that said newspaper is a legal newspaper; and that it has a bona fide circulation of more than two hundred copies weekly, and has been published within said County of Grant in the English language and has been admitted to the United States mail under second class mailing privilege, for at least one year next prior to the publication of the Notice herein mentioned, and has been printed wholly in an office maintained at the said place of publication, that I, the undersigned, Bookkeeper of said newspaper, in charge of the accounts receivable department thereof, have personal knowledge of all the facts stated in this affidavit; that the advertisement headed Notice of Application Nos. 8439-3 and 8440-3 Grant-Roberts Rural Water System 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, on the day of each week on which the said newspaper was regularly published, to-wit:

<u>October 28</u>	<u>20</u>	<u>20</u>
<u>20</u>	<u>20</u>	<u>20</u>
<u>20</u>	<u>20</u>	<u>20</u>

That \$ 39.92, being the full amount of the fee charged for the publication of said Notice, inures to the benefit of the publisher of the Grant County Review; that no agreement or understanding for the division thereof has been made with any person, and that no part has been agreed to be paid to any person whomsoever.

Ashlie Schweitzer

Subscribed and sworn to before me this 28th day of Oct 2020

Debra Hemmick
Notary Public, Grant County, South Dakota

RECEIVED

NOV 02 2020

WATER RIGHTS
PROGRAM

Publication Fee \$ 39.92
Notarial Fee \$
Total \$ 39.92

NOTICE OF APPLICATION NOS. 8439-3 AND 8440-3

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Printer's Affidavit of Publication
and Attorney's Affidavit Ex-Rel. Fees

In _____ Court

STATE OF SOUTH DAKOTA
COUNTY OF GRANT } ss.

Filed in the office of _____

on the

day of _____, 20____

Attorney for _____

neer'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 November 9, 2020.

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Published once at an approximate cost of \$39.92.

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, October 19, 2020 10:02 AM
To: Clear Lake Courier (clprint1@itctel.com)
Subject: 8439-3 and 8440-3, Grant-Roberts RWS
Attachments: 8439-3&8440-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on October 28, 2020.

Grant-Roberts Rural Water System, c/o Brent Hoffman, PO Box 145, Milbank SD 57252 (605 432-6793) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

Water Rights Program
(605) 773-3352



Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, October 19, 2020 10:01 AM
To: News@Sissetoncourier. Com (news@sissetoncourier.com)
Subject: FW: 8439-3 and 8440-3, Grant-Roberts RWS
Attachments: 8439-3&8440-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on October 27, 2020.

Grant-Roberts Rural Water System, c/o Brent Hoffman, PO Box 145, Milbank SD 57252 (605 432-6793) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak
Water Rights Program
(605) 773-3352



Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, October 19, 2020 10:00 AM
To: Julie Madison, Grant County Review (gcreview@itcmilbank.com)
Subject: 8439-3 and 8440-3, Grant-Roberts RWS
Attachments: 8439-3&8440-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on October 28, 2020.

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Karen Schlaak
Water Rights Program
(605) 773-3352



Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, October 19, 2020 9:58 AM
To: Watertown Public Opinon (legals@thepublicopinion.com)
Subject: 8439-3 and 8440-3, Grant-Roberts RWS
Attachments: 8439-3&8440-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on October 28, 2020.

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Karen Schlaak
Water Rights Program
(605) 773-3352





DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

October 19, 2020

Grant-Roberts Rural Water System Inc.
c/o Brent Hoffman
PO Box 145
Milbank SD 57252

Dear Mr. Hoffman

Water Permit Application Nos. 8439-3 and 8440-3 for rural water system use has been examined and found to comply with the South Dakota Water Laws and applicable rules. Notices have been sent to the following papers:

Public Opinion, Watertown	605 886-6901
Grant Co. Review, Milbank	605 432-4516
Sisseton Courier, Sisseton	605 698-7642
Clear Lake Courier, Clear Lake	605 874-2499

You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and report on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendations, 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 applications.

NOTICE OF APPLICATION NOS. 8439-3 and 8440-3

Notice is given that Grant-Roberts Rural Water System Inc., c/o Brent Hoffman, PO Box 145, Milbank SD 57252 has filed the following water permit and future use permit applications. Application No. 8439-3 proposes to increase the diversion rate and annual volume authorized by Water Right No. 6654-3 and Water Permit No. 8321-3. Water Right No. 6654-3 authorizes 1,074 acre-feet of water annually at a maximum pump rate of 3.56 cubic feet of water per second (cfs) from six wells completed into the Antelope Valley Aquifer located in the NE 1/4 SE 1/4, S 1/2 NE 1/4, NE 1/4 NW 1/4 Section 10-T119N-R51W. Water Permit No. 8321-3 authorizes an additional 307 acre-feet of water from the six wells authorized by No. 6654-3 for a combined total of 1,381 acre-feet. This application is requesting an additional 1.58 cfs and an additional 614 acre-feet of annual volume from the six existing wells described above. This application, if approved, Water Permit No. 8321-3, and Water Right No. 6654-3 combined would authorize a total of 5.14 cfs and 1,995 acre-feet of water annually from the six existing wells for rural water system use.

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Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8439-3 and 8440-3 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 recommendations with qualifications, the applications, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

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DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

8439-3

8440-3

JAN 19 2021

Grant-Roberts Rural Water System Inc
c/o Brent Hoffmann
PO Box 145
Milbank SD 57252

Dear Mr. Hoffmann:

Enclosed is Water Permit No. 8439-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

Also, enclosed is Future Use Permit No. 8440-3. When plans for facilities are prepared to put any portion of the water granted in the future use permits to beneficial use, an application covering such facilities and water use should be submitted to this office before construction is initiated.

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 16 2023

Grant-Roberts Rural Water System Inc.
c/o Brent Hoffmann
PO Box 145
Milbank SD 57252

8439-3
6654-3
8321-3

Dear Mr. Hoffmann:

Enclosed is Water License No. 8439-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

NOTE: The investigation found your system is capable of diverting 6.0 cubic feet of water per second (cfs) which is equivalent to approximately 2,693 gallons per minute. The limit your system is authorized for is 5.14 cfs (equivalent to 2,307 gpm). Diversion of water under this water license is limited to 5.14 cfs.

NOTE: Water Right No. 6654-3 and Water Permit No. 8321-3 are incorporated under this license.

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 8439-3

(1) Grant-Roberts Rural Water System Inc., c/o Brent Hoffmann; PO Box 145, Milbank SD 57252, made Application No. 8439-3, August 24, 2020, for a water permit to divert an additional 1.58 cubic feet of water per second (cfs) from groundwater, six existing wells (Antelope Valley Aquifer), Codington County, South Dakota for rural water system purposes. Permit No. 8439-3, with a priority date of August 24, 2020, was approved November 9, 2020, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before November 9, 2025 and for the application to beneficial use of water on or before November 9, 2029.

Water Permit No. 8439-3 increases the diversion rate and annual volume authorized by Water Right No. 6654-3 and Water Permit No. 8321-3 to a combined authorized total of 5.14 cfs and 1,995 acres-feet of water annually (ac-ft) from the six existing wells. The site of the existing well field is located one mile north of South Shore, SD.

The applicable portions of Water Permit Nos. 6654-3 and 8321-3 are incorporated into this Water License. Priority dates are described in (4) of this license.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 5.14 cubic feet of water per second for beneficial use. The locations of the diversion points are: *(Well #2 and Well #5 are abandoned)*

- Well #1: 2,975 ft S & 5,000 ft E of the NW corner of Section 10, T119N, R51W (NE ¼ SE ¼)
(Latitude 45.12774 Longitude -96.92520)
- Well #3: 2,780 ft S & 4,560 ft E of the NW corner of Section 10, T119N, R51W (NE ¼ SE ¼)
(Latitude 45.12824 Longitude -96.92697)
- Well #4: 2,275 ft S & 4,695 ft E of the NW corner of Section 10, T119N, R51W (SE ¼ NE ¼)
(Latitude 45.12967 Longitude -96.92641)
- Well #6: 3,050 ft S & 4,380 ft E of the NW corner of Section 10, T119N, R51W (NE ¼ SE ¼)
(Latitude 45.12765 Longitude -96.92724)
- Well #7: 1,605 ft S & 3,690 ft E of the NW corner of Section 10, T119N, R51W (SW ¼ NE ¼)
(Latitude 45.13126 Longitude -96.93040)
- Well #8: 545 ft S & 1,390 ft E of the NW corner of Section 10, T119N, R51W (NE ¼ NW ¼)
(Latitude 45.13444 Longitude -96.93938)

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use as a rural water system for the following areas:

Codington, Grant, Roberts, and Deuel Counties in South Dakota and Lac Qui Parle and Big Stone Counties in Minnesota. In South Dakota this includes the communities of South Shore, Stockholm, Strandburg, Wilmot, Twin Brooks, Big Stone City, Corona, and Marvin.

continued

(4) Pursuant to South Dakota Water Law 46-5-30.1 Grant-Roberts Rural Water System Inc., the holder and/or owner of Water Right No. 8439-3 is issued a license to appropriate water, the right to use a total of 5.14 cfs and 1,995 ac-ft of water annually from groundwater, six existing wells (Antelope Valley Aquifer), from the locations specified in (2) of this license for rural water system purposes, with priority dates as follows:

- January 6, 1978: 1.15 cfs & 500 ac-ft annually
- September 9, 1991: 1.52 cfs & 120 ac-ft annually
- December 1, 2003: 454 ac-ft annually
- August 30, 2005: 0.89 cfs
- December 20, 2017: 307 ac-ft annually
- August 24, 2020: 1.58 cfs & 614 ac-ft annually

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8439-3 and subject to the following qualifications:

1. The wells approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right shall control their 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. 8439-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the 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. *(A copy of the well completion reports are on file with the Water Rights Program.)*
3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Antelope Valley Aquifer.
4. Water Right No. 8439-3, Water Right No. 6654-3, and Water Permit No. 8321-3, combined, authorize a total annual diversion of 1,995 acre-feet of water.

Eric Gronlund

Eric Gronlund, Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

JUN 16 2023

date



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8439-3

I have this day, May 2, 2023, made a thorough examination of the water use system constructed by Grant-Roberts RWS, PO Box 145, Milbank, SD 57252 of Permit No. 8439-3, bearing the priority of August 24, 2020 authorizing the diversion of 5.14 cu. ft. per second of the waters of the Antelope Valley Aquifer source for Rural Water System purposes, in Codington County.

A. Works used to divert the water:

Well Information: (See attached documents) 6 reports from Their Well Company

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

- 1) Type Buried pipe lines 2) Size various inches 3) Length various feet

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
2) Exceptions to compliance are: None

E. Condition and Location:

- The system is in good condition with the point(s) of diversion located as follows: WELL LOCATIONS
From the NW corner Sec 10 T119N R51W WELL 1: 2975 ft S & 5000 ft E, Lat 45.12774 Long -
96.92520 (NE ¼ SE ¼) WELL 3: 2780 ft S & 4560 ft E, Lat 45.12824 Long -96.92697 (NE ¼ SE ¼)
WELL 4: 2275 ft S & 4695 ft E, Lat 45.12967 Long -96.92641 (SE ¼ NE ¼) WELL 6: 3050 ft S &
4380 ft E, Lat 45.12765 Long -96.92724 (NE ¼ SE ¼) WELL 7: 1605 ft S & 3690 ft E, Lat 45.13126
Long -96.93040 (SW ¼ NE ¼) WELL 8: 545 ft S & 1390 ft E, Lat 45.13444 Long -96.93938 (NE ¼
NW ¼).
- The works are capable of diverting and conveying to the place of use 6.0 cu. ft. per second of water which is to be used for Rural Water System purposes.
- All structures, wells and lands on map Y

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

The locations of the six (6) wells were determined with the aid of FSA imagery and ArcMAPS software. The pump rates reported in an attached document was used to establish the system flow capacity of about 2,700 gpm (6 cfs), when all pumps are operational, which is greater than the authorized 5.14 cfs. The mailing address and the telephone number in the permit materials are current. I talked to Mr. Brent Hoffman, System Manager, in conjunction with the field inspection visit.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: June 5, 2023

WELL #1

THEIN Well Company Spicer, Clara City

Customer	Grant Roberts Rural Water	City Hall Phone	800-917-2031
Address	PO Box 145	City Hall Fax	605-432-5386
City / State / Zip	Milbank SD 57252	City Mgr / Clerk	
Water Supt	Brent Hoffmann	Cell Phone	320-980-5370
Maint Phone		Date Last Inspected	11-23-2022
PMI Contract y	Due Date	E-Mail	MANAGER@GRRWS.COM

Well # Location	1	Pump Type TS	S
Unique No		Head	Grundfos - no tag
Year Constructed	1978	Motor	25hp, 460V, 3 phase
Stat WL	23	Pump Level	32
		Wire	8 awg
GPM	410	Spec Cap	45.56
		Starter	VFD
Casing Data	8"	Check Valve	in pump
Screen Data	30	Drop Pipe	5" x 63'
Well Depth	110	Discharge Head	Monitor Pitless
Last Rehabbed		Date Last Repaired	5-12-2020
		Date for Rehab	

Hardness	Iron	MN	PH
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Comments

TUBE UNDER VENT FOR DRAWDOWN
 2020- replaced pitless unit, new check valve, 63' of drop pipe replaced

HISTORY

Insp. Date	G.P.M.	S.W.L.	P.W.L.	Draw Down	Spec. Cap.	Disc. Pres.
11-23-2022	443	28.83	47.08	18.25	24.27	to filter
10-28-2021	450	30.42	49.17	18.75	24.00	to filter
10-22-2020	450	36.33	53.92	17.59	25.58	to filter
12-17-2019	535	40.33	57	16.67	32.09	to filter
12-19-2018	650	41.33	112	70.67	9.20	to filter
1-17-2018	500	34.5	51.94	17.44	28.67	to filter

Insp. Date	V 1-2	V 2-3	V 1-3	A 1	A 2	A 3	Winding Resistance	Insulation Resistance
11-23-2022	447	446	446	24	24	24	58 Hz	
10-28-2021	442	442	442	23	24	24	58Hz	1740 rpm
10-22-2020	451			23			58 Hz	1740 rpm

Insp. Date	Vibration Top Bearing	Vibration Bottom Bearing	Base
11-23-2022			
10-28-2021			
10-22-2020			

WELL #3

THEIN Well Company Spicer, Clara City

Customer	Grant Roberts Rural Water	City Hall Phone	800-917-2031
Address	PO Box 145	City Hall Fax	605-432-5386
City / State / Zip	Milbank SD 57252	City Mgr / Clerk	
Water Supt	Brent Hoffmann	Cell Phone	320-980-5370
Maint Phone		Date Last Inspected	11-23-2022
PMI Contract	y Due Date	E-Mail	MANAGER@GRRWS.COM

Well # Location	3	Pump Type TS	S
Unique No		Head	Grundfos 475S250-3
Year Constructed	2012	Motor	25HP 460v
Stat WL	65	Pump Level	82
		Wire	8/3
GPM	500	Spec Cap	29.41
		Starter	VFD
Casing Data	10" Sdr. 21	Check Valve	
Screen Data	10" X 20' .025 slot S.S.	Drop Pipe	120' x 6" certa lok yel
Well Depth	140	Discharge Head	Monitor
Last Rehabbed		Date Last Repaired	8-1-2022
		Date for Rehab	

Hardness	23	Iron	MN	PH
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Comments

TAKE COVER OFF FOR DRAWDOWN
2022- new motor and wire

HISTORY

Insp. Date	G.P.M.	S.W.L.	P.W.L.	Draw Down	Spec. Cap.	Disc. Pres.
11-23-2022	465	58.92	97	38.08	12.21	to filter
10-28-2021	411	47	77.75	30.75	13.37	to filter
10-22-2020	400	63.5	88	24.50	16.33	to filter
12-17-2019	470	49.17	73.92	24.75	18.99	to filter
12-19-2018	450	54.83	84	29.17	15.43	08
1-17-2018	600				0.00	to filter

Insp. Date	V 1-2	V 2-3	V 1-3	A 1	A 2	A 3	Winding Resistance	Insulation Resistance
11-23-2022	451	451	451	34	34	33	58 Hz	
10-28-2021	430	430	430	33	33	33	58Hz	1740 rpm
10-22-2020	442			32			58 Hz	1740 Rpm

Insp. Date	Vibration Top Bearing	Vibration Bottom Bearing	Base
11-23-2022			
10-28-2021			
10-22-2020			

WELL #4

THEIN Well Company Spicer, Clara City

Customer	Grant Roberts Rural Water	City Hall Phone	800-917-2031
Address	PO Box 145	City Hall Fax	605-432-5386
City / State / Zip	Milbank SD 57252	City Mgr / Clerk	
Water Supt	Brent Hoffmann	Cell Phone	320-980-5370
Maint Phone		Date Last Inspected	11-23-2022
PMI Contract	y Due Date	E-Mail	MANAGER@GRRWS.COM

Well # Location	4	Pump Type TS	S
Unique No		Head	Franklin 8sts550-3c
Year Constructed		Motor	25HP Hitachi 460v
Stat WL	Pump Level	Wire	6/4
GPM	Spec Cap	Starter	VFD
Casing Data		Check Valve	DI
Screen Data		Drop Pipe	6" x 70' steel
Well Depth		Discharge Head	Monitor Pitless
Last Rehabbed	2-10-2023	Date Last Repaired	11-28-2022
			Date for Rehab

Hardness	Iron	MN	PH
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Comments

TAKE COVER OFF FOR DRAWDOWN
 2018. Use 4" OB well for drawdown per operator.
 2019- new motor, wire, 21' of drop pipe
 2022-2023 rehabbed, 42' of drop pipe, check valve, new pump

HISTORY

Insp. Date	G.P.M.	S.W.L.	P.W.L.	Draw Down	Spec. Cap.	Disc. Pres.
11-23-2022	75	30.92			0.00	to filter
10-28-2021	509	36.67	54.08	17.41	29.24	to filter
10-22-2020	513	42.92	60.92	18.00	28.50	to filter
12-17-2019	510	46.92	58.33	11.41	44.70	to filter
12-19-2018	420	30.75	36.25	5.50	76.36	to filter
1-17-2018	430	43.42	52.75	9.33	46.09	to filter

Insp. Date	V 1-2	V 2-3	V 1-3	A 1	A 2	A 3	Winding Resistance	Insulation Resistance
11-23-2022							58 Hz	1740 rpm
10-28-2021	428	428	427	34	33	33	58 Hz	1740 rpm
10-22-2020	442			33			58Hz	1740 rpm

Insp. Date	Vibration Top Bearing	Vibration Bottom Bearing	Base
11-23-2022			
10-28-2021			
10-22-2020			

WELL #6

THEIN Well Company Spicer, Clara City

Customer	Grant Roberts Rural Water	City Hall Phone	800-917-2031
Address	PO Box 145	City Hall Fax	605-432-5386
City / State / Zip	Milbank SD 57252	City Mgr / Clerk	
Water Supt	Brent Hoffmann	Cell Phone	320-980-5370
Maint Phone		Date Last Inspected	11-23-2022
PMI Contract	y Due Date	E-Mail	MANAGER@GRRWS.COM

Well # Location	6	Pump Type TS	S
Unique No		Head	Wolf 8mm5v
Year Constructed		Motor	25HP 460V Hitachi
Stat WL	Pump Level	Wire	8/4
GPM	Spec Cap	Starter	VFD
Casing Data	10"	Check Valve	DI
Screen Data		Drop Pipe	6" x 105'
Well Depth		Discharge Head	Monitor Pitless
Last Rehabbed		Date Last Repaired	5-21-2019
		Date for Rehab	

Hardness	Iron	MN	PH
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Comments

TAKE COVER OFF FOR DRAWDOWN
2019- New pump, motor, drop pipe, check, wire

HISTORY

Insp. Date	G.P.M.	S.W.L.	P.W.L.	Draw Down	Spec. Cap.	Disc. Pres.
11-23-2022	508	55.83	78.92	23.09	22.00	to filter
10-28-2021	558	42.92	70.08	27.16	20.54	to filter
10-22-2020	521	53.75	78.17	24.42	21.33	to filter
12-17-2019	850	42.67	69.33	26.66	31.88	to filter
12-19-2018	510	46.92	51.11	4.19	121.72	to filter
1-17-2018	560	45.08	50.67	5.59	100.18	to filter

Insp. Date	V 1-2	V 2-3	V 1-3	A 1	A 2	A 3	Winding Resistance	Insulation Resistance
11-23-2022	453	453	453	34	33	33	58 Hz	
10-28-2021	421	421	421	34	34	34	58 Hz	1740 rpm
10-22-2020	442			33			58 Hz	1479 rpm

Insp. Date	Vibration Top Bearing	Vibration Bottom Bearing	Base
11-23-2022			
10-28-2021			
10-22-2020			

WELL #7

THEIN Well Company Spicer, Clara City

Customer	Grant Roberts Rural Water	City Hall Phone	800-917-2031
Address	PO Box 145	City Hall Fax	605-432-5386
City / State / Zip	Milbank SD 57252	City Mgr / Clerk	
Water Supt	Brent Hoffmann	Cell Phone	320-980-5370
Maint Phone		Date Last Inspected	11-23-2022
PMI Contract	y Due Date	E-Mail	MANAGER@GRRWS.COM

Well # Location	7	Pump Type TS	S
Unique No		Head	Grundfos 475s250-3
Year Constructed	2009	Motor	25hp, 460V, 3 phase
Stat WL	53	Pump Level	123
GPM	400	Wire	8/3
Spec Cap	5.71	Starter	Mag
Casing Data	10"	Check Valve	
Screen Data	10" X 16' Stainless 40 slt	Drop Pipe	6" X 105' steel
Well Depth	147	Discharge Head	Monitor Pitless
Last Rehabbed		Date Last Repaired	1-3-2022
		Date for Rehab	

Hardness	Iron	MN	PH
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Comments

TAKE COVER OFF FOR DRAWDOWN 3/4" poly in well
 2018- new pump, motor, 42' of pipe, well measures 128'
 2022- replaced 42' of drop pipe, and check valve, - pitless spool should be replaced next pull

HISTORY

Insp. Date	G.P.M.	S.W.L.	P.W.L.	Draw Down	Spec. Cap.	Disc. Pres.
11-23-2022	486	75.5	79.58	4.08	119.12	to filter
10-28-2021	415	63.08	66.33	3.25	127.69	to filter
10-22-2020	398	71.08	73.58	2.50	159.20	to filter
12-17-2019	445	63.08			0.00	to filter
12-19-2018	440	90.58	94.58	4.00	110.00	to filter
1-17-2018	440	63.08			0.00	to filter

Insp. Date	V 1-2	V 2-3	V 1-3	A 1	A 2	A 3	Winding Resistance	Insulation Resistance
11-23-2022	484	485	485	37	36	36	0-0-0	00-00-00
10-28-2021	477	480	482	35	36	37	0-0-0	00-00-00
10-22-2020	495	494	494	36	36	36	0-0-0	00-00-00

Insp. Date	Vibration Top Bearing	Vibration Bottom Bearing	Base
11-23-2022			
10-28-2021			
10-22-2020			

WELL # 8

THEIN Well Company Spicer, Clara City

Customer	Grant Roberts Rural Water	City Hall Phone	800-917-2031
Address	PO Box 145	City Hall Fax	605-432-5386
City / State / Zip	Milbank SD 57252	City Mgr / Clerk	
Water Supt	Brent Hoffmann	Cell Phone	320-980-5370
Maint Phone		Date Last Inspected	11-23-2022
PMI Contract y	Due Date	E-Mail	MANAGER@GRRWS.COM

Well # Location	8	Pump Type TS	S
Unique No		Head	Grundfos 475S300
Year Constructed	2009	Motor	30hp, 460V, Hitachi
Stat WL	54	Pump Level	74
		Wire	8/4
GPM	400	Spec Cap	20.00
		Starter	Mag
Casing Data	10"	Check Valve	in pump
Screen Data	10" X 30' Stainless, 40slt	Drop Pipe	6" X 126" steel
Well Depth	129	Discharge Head	Monitor Pitless
Last Rehabbed	2-13-2023	Date Last Repaired	2-13-2023
		Date for Rehab	

Hardness	Iron	MN	PH
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Comments

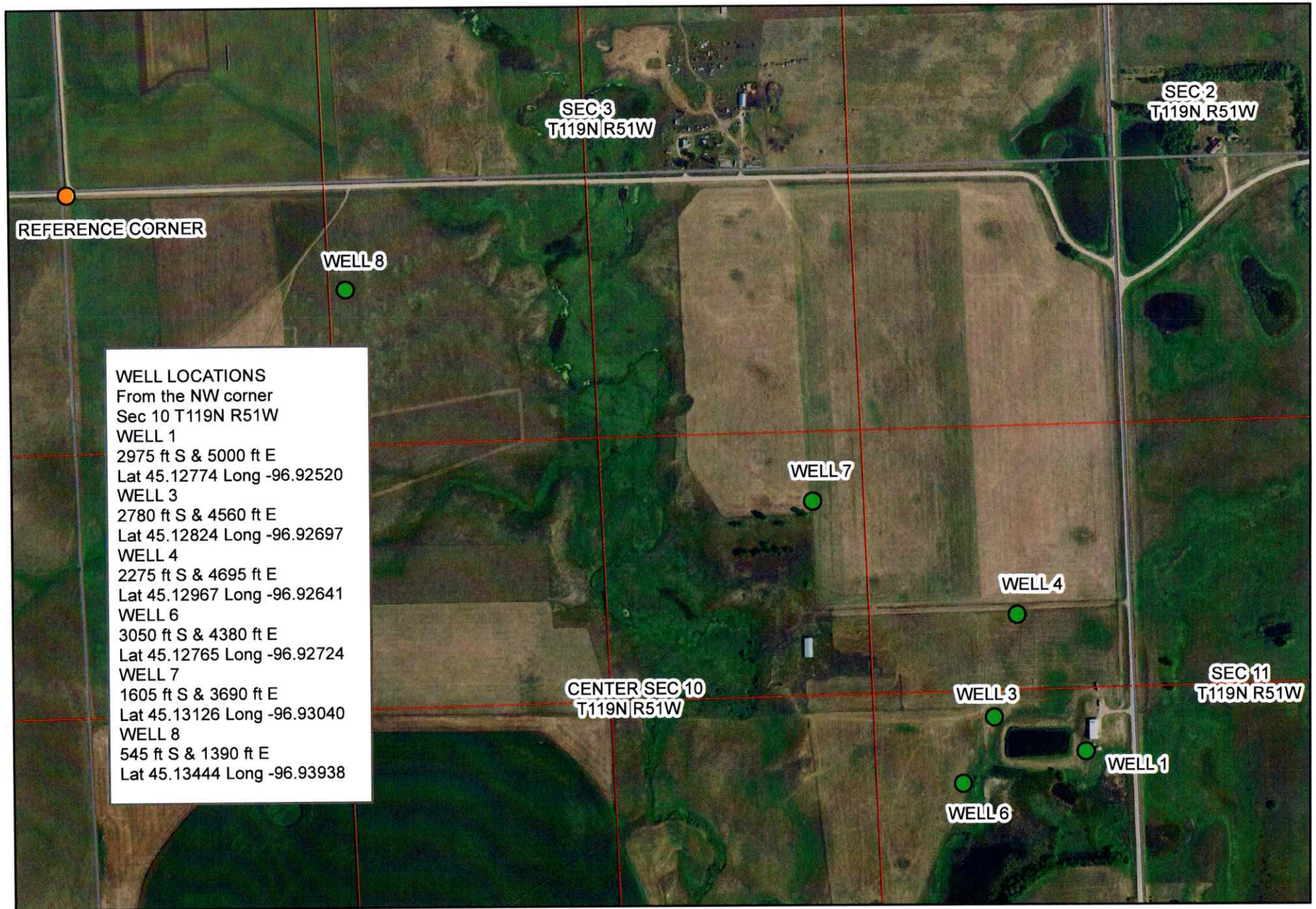
TAKE COVER OFF FOR DRAWDOWN
 2019- new pump, motor, wire, 21' drop pipe
 2023- Rehabbed, replaced drop pipe, check valve, motor

HISTORY

Insp. Date	G.P.M.	S.W.L.	P.W.L.	Draw Down	Spec. Cap.	Disc. Pres.
11-23-2022	413	86.92	132.33	45.41	9.09	to filter
10-28-2021	437	82	128.33	46.33	9.43	to filter
10-22-2020	490	81.17	129.33	48.16	10.17	to filter
12-19-2018	405	98.08	115.25	17.17	23.59	to filter
1-17-2018	510	58.25	105.67	47.42	10.75	to filter

Insp. Date	V 1-2	V 2-3	V 1-3	A 1	A 2	A 3	Winding Resistance	Insulation Resistance
11-23-2022	482	483	484	45	45	46	0-0-0	00-00-00
10-28-2021	484	484	486	43	43	43	0-0-0	00-00-00
10-22-2020	492	493	493	44	41	43	0-0-0	00-00-00

Insp. Date	Vibration Top Bearing	Vibration Bottom Bearing	Base
11-23-2022			
10-28-2021			
10-22-2020			



0 0.075 0.15 0.3 0.45 0.6 Miles



Darrell DeBoer
 Water Right Inspector