

WATER PERMIT NO. 8814-3

Name of Applicant: **Craig Arthur**

Address: **16116 456th Ave, Watertown SD 57201**

Phone: **605-880-0289**

Amount of Water Claimed: **1.44**

Total Acres: **102**

Source of Water Supply: **Groundwater**

Water to be used for: **Irrigation**

County: **Grant**

Type of Waste Disposal System:

Location: **Approx. 6 miles southwest of Milbank**

PRIORITY Date Received: **12-19-23**

Application/License Fee: **\$950.00**

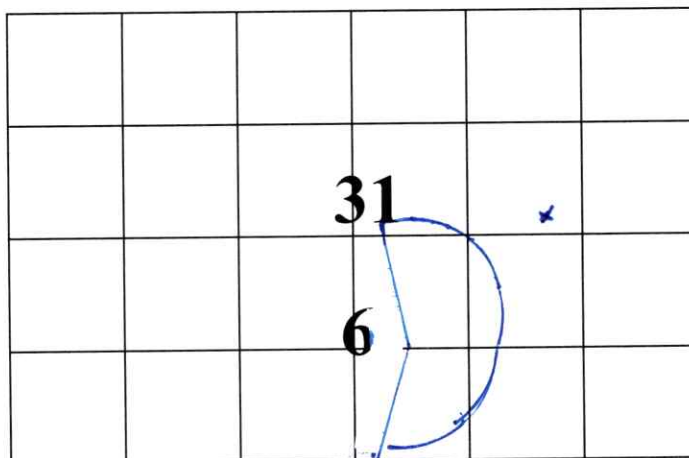
Corrected Application Received: **12-20-23**

Period of Annual Use: **May 1 – September 30**

Remarks: **Existing well**

Diversion Point: **Corner of SE 1/4 Sec 31-T120N-R49W**

Land to be Irrigated: **SW 1/4 NE 1/4, NW 1/4 NE 1/4, NE 1/4 NE 1/4, SE 1/4 NE 1/4 Sec 6-T119-R49W and SW 1/4 SE 1/4 Sec 31-120N-R49W**



Depth of Well: **80**

Well Driller: **Minnesota Drillers**

Remarks:

Type of Map: **aerial**

Reviewed and the Number Assigned on: **12-20-23**

By: **Rachel Rodriguez**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8814-3**

Date of first receipt of application December 19, 2023.

Date of return to applicant for corrections, amendments or changes December 20, 2023.

Date of receipt of corrected application December 20, 2023.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8814-3 to Craig Arthur, 16116 456th Avenue, Watertown SD 57201 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. 8814-3 appropriates 1.44 cubic feet of water per second from one existing well completed into the Wilmot Aquifer (approximately 80 feet deep) located in the SE 1/4 SE 1/4 Section 31-T120N-R49W for irrigation of 102 acres located in the NE 1/4 Section 6-T119N-R49W and the SW 1/4 SE 1/4 Section 31-T120N-R49W. This site is located approximately 6 miles southwest of Milbank SD.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is December 19, 2023.
4. The date of approval of Permit No. 8814-3 is March 4, 2024.
5. One-fifth of the construction is to be completed on or before September 4, 2026.
6. All construction is to be completed on or before March 4, 2029.
7. Water is to be put to beneficial use on or before March 4, 2033.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8814-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Any replacement of the well authorized by Permit No. 8814-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

MAR 13 2024
date



FORM 2: Application for irrigation in South Dakota
(type or print)

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8814-3</u>	Hydrologic Unit <u>07020001</u>
	Basin <u>Upper Minnesota</u>	
	Newspaper <u>Milbank/Grant Co Review</u>	
	<u>Watertown Public Opinion</u> (office use only)	

RECEIVED

DEC 19 2023

OFFICE OF
WATER

Application for Permit to Appropriate Water for Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____
(Use predates Mar 2, 1955)

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

1. Name to Appear on Irrigation Permit Craig Arthur

Note: The "Name to Appear on Irrigation Permit" must be the name in which the property to be irrigated is held in.

Mailing Address 16116 456th ave watertown sd 57201
(Address) (City) (State) (Zip Code)
Phone 6058800289 Mobile 6058800289 Email cjarthur30@hotmail.com

2. Amount of water claimed 1.44 *CFS or 650 **GPM ***AF Total Acreage 101.74 102
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply well existing

4. Location of point of diversion 1 well n88 degrees w 860 feet from se corner section 31 t 120N R49W
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County grant county, sd

5. County or counties where water will be used grant county, sd

6. Annual period during which water is to be used may-september 30

7. List below each forty-acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
sw 1/4 of ne 1/4 119n 49w section 6	32	sw 1/4 of se 1/4 120n 49w section 31	5
nw 1/4 of ne 1/4 119n 49w section 6	32		
ne 1/4 of ne 1/4 119 n 49w section 6	16.5		
se 1/4 of ne 1/4 119 n 49w section 6	16.5		

8. Give a description of the project. (Attach sheet if more space is needed)

adding 8 tower center pivot irrigation system to 119n 49w section 6 madison township grant county south dakota overlapping into 120n 49w section 31 grant center township grant county south dakota. Using existing well from previous irrigation project

I, craig arthur owner, 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.

2021-08

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 1 Provide copy of log(s), if available. Drilled by minnesota drillers

For either existing or proposed wells:

c) Well Depth (required) 80 Depth to Top of Water Bearing Material 20ft Depth to Water from Surface 5

d) Distance to nearest domestic well on applicant's property na Property owned by others 160 rds

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)

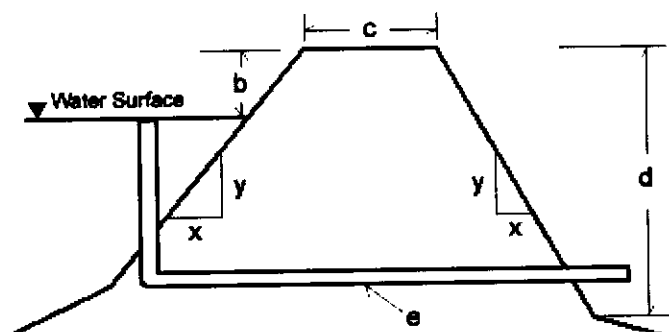
Upstream _____

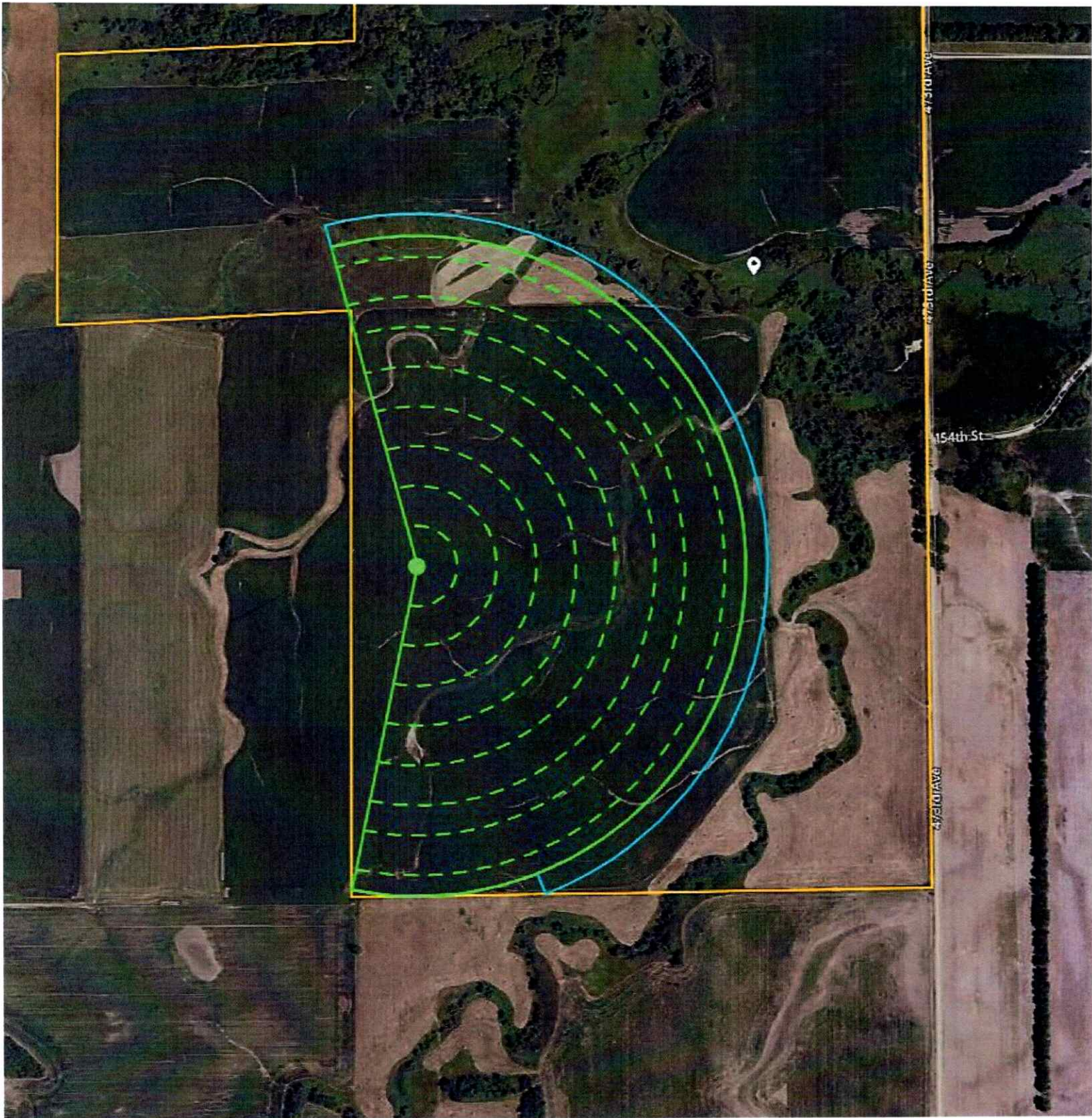
Downstream _____

h) Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





MIDWEST IRRIGATION & ELECTRIC INC.

552 Main St PO Box 36; Big Stone City, 57216-2179

Tel: 1 (605) 862-8149; Port: 1 (605) 595-3440

Michael Pribbenow - mie.bigstone@gmail.com

www.miebigstone.com

Design Detail & Summary



Prepared For:
arthur farms
Joe Arthur



System Name: Wiper - Copy

Span #	Diameter	Length	Cumulative Length
1	6 - 5/8" (168 mm)	180.17 ft	180.17 ft
2	6 - 5/8" (168 mm)	178.92 ft	359.08 ft
3	6 - 5/8" (168 mm)	178.92 ft	538.00 ft
4	6 - 5/8" (168 mm)	178.92 ft	716.92 ft
5	6 - 5/8" (168 mm)	178.92 ft	895.83 ft
6	6 - 5/8" (168 mm)	178.92 ft	1074.75 ft
7	6 - 5/8" (168 mm)	135.00 ft	1209.75 ft
8	6 - 5/8" (168 mm)	178.92 ft	1388.67 ft
Overhang:	5 - 9/16" (141 mm)	91.00 ft	1479.67 ft
End Gun:	-	3.00 ft	1482.67 ft



Total System Length: 1482.67 ft
 Number of Spans: 8
 Available Outlet Count: 206
 Degree of Sweep: 207 degrees
 Endgun Throw: 100.00 ft
 System Wetted Area: 91.06 acres
 Corner Wetted Area: NA
 End Gun Wetted Area: 10.68 acres
Total Wetted Area: 101.74 acres

Center, Start, Stop Positions							
Center Position		Start Position		Stop Position		Angle Degree From North	
Lat	Long	Lat	Long	Lat	Long	Start	Stop
45.146488°	-96.751360°	45.150413°	-96.752862°	45.142505°	-96.752517°	344.8°	191.6°

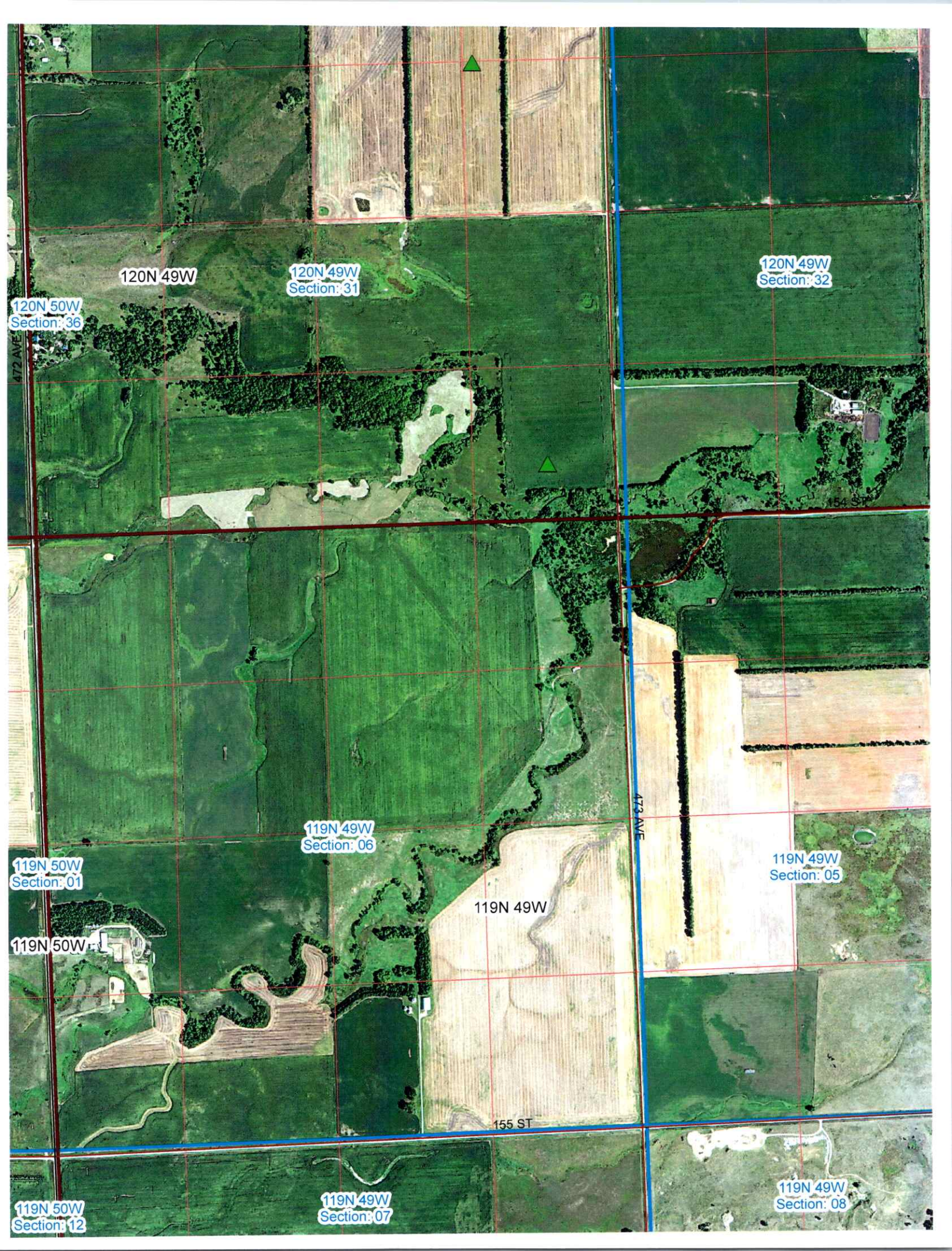
Endgun Coverage Area									
Primary Endgun	Angle Degree From North		Angle Degree From Start		Start Position		Stop Position		Total Coverage Area
	Start	Stop	Start	Stop	Lat	Long	Lat	Long	
Area 1	344.8°	158.7°	0.0°	173.9°	45.150413°	-96.752862°	45.142699°	-96.749274°	10.68

Second Endgun	Angle Degree From North		Angle Degree From Start		Start Position		Stop Position		Total Coverage Area
	Start	Stop	Start	Stop	Lat	Long	Lat	Long	

MIDWEST IRRIGATION & ELECTRIC INC.

552 Main St PO Box 36; Big Stone City, 57216-2179
 Office: 1 (605) 862-8149; Mobile: 1 (605) 595-3440
 Michael Pribbenow - mie.bigstone@gmail.com
 Miebighstone.com

12/19/2023



120N 49W

120N 49W
Section: 31

120N 49W
Section: 32

120N 50W
Section: 36

472 AVE

154 ST

119N 49W
Section: 06

119N 50W
Section: 01

119N 49W
Section: 05

119N 50W

119N 49W

473 AVE

155 ST

119N 50W
Section: 12

119N 49W
Section: 07

119N 49W
Section: 08

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date December 19, 2024

RECEIVED OF Craig Arthru 16116 456th Ave., Watertown SD 57201

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

Fee for Application for Permit No. <u>8814-3</u> to Appropriate Water, to construct and to put water to beneficial use	<u>\$750.00</u>
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>8814-3</u>	<u>\$200.00</u>
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	<u>\$950.00</u>

By Eric Gronlund
Chief Engineer
me

Re: [EXT] Change in well location

Craig Arthur <cjarthur30@hotmail.com>

Thu 1/25/2024 10:20 AM

To: Dewell, Amanda <Amanda.Dewell@state.sd.us>

Yes. It will be same depth.

Sent via the Samsung Galaxy S22+ 5G, an AT&T 5G smartphone
Get [Outlook for Android](#)

From: Dewell, Amanda <Amanda.Dewell@state.sd.us>

Sent: Thursday, January 25, 2024 10:19:13 AM

To: Craig Arthur <cjarthur30@hotmail.com>

Subject: Re: Change in well location

I would also need to confirm that the new well is intended to be constructed at the same depth (approx 80 ft).

Amanda Dewell

DANR - Water Rights Program

Main Phone: 605 773-3352

Website: danr.sd.gov



From: Craig Arthur <cjarthur30@hotmail.com>

Sent: Thursday, January 25, 2024 10:06 AM

To: Dewell, Amanda <Amanda.Dewell@state.sd.us>

Subject: Re: [EXT] Change in well location

That would be perfect as far as I am concerned.

Sent via the Samsung Galaxy S22+ 5G, an AT&T 5G smartphone
Get [Outlook for Android](#)

From: Dewell, Amanda <Amanda.Dewell@state.sd.us>

Sent: Thursday, January 25, 2024 9:55:39 AM

To: Craig Arthur <cjarthur30@hotmail.com>

Subject: Change in well location

Craig -

Following up on this morning's conversation where you indicated the need for a new well to supply water to your irrigation project, there was some uncertainty on the exact location of the new well, as the old well seems to fall on or very near to the section line. It might be simplest, for the sake of public notice, to advertise this new well as "adjacent to the section line, between SE ¼ SE ¼ Section 31, T120N, R49W & NE ¼ NE ¼ Section 6, T119N, R49W". Thoughts?

Amanda Dewell

DANR - Water Rights Program

Main Phone: 605 773-3352

Website: danr.sd.gov



Rodriguez, Rachel

From: Craig Arthur <cjarthur30@hotmail.com>
Sent: Wednesday, December 20, 2023 12:07 PM
To: Rodriguez, Rachel
Subject: Re: [EXT] Water Permit Application

The only information I have is what was available on the website amanda shared with me.

Sent via the Samsung Galaxy S22+ 5G, an AT&T 5G smartphone
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From: Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>
Sent: Wednesday, December 20, 2023 12:05:09 PM
To: Craig Arthur <cjarthur30@hotmail.com>
Subject: RE: Water Permit Application

Excellent! Do you by chance have a copy of the Minnesota Drillers well report?

Thank you,

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



From: Craig Arthur <cjarthur30@hotmail.com>
Sent: Wednesday, December 20, 2023 9:36 AM
To: Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>
Subject: Re: [EXT] Water Permit Application

Here is an attached map from my irrigation salesman, it should have all the information you need. If this map isnt acceptable let me know, the existing well is marked on this map also by a white pin to the ne of the pivot. Whatever needs to be done to match this map is good with me. And yes adding existing well to page one is right there will not be a new well at this time as a long as the performance of the old one is acceptable. if you have any more questions let me know thanks.

From: Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>
Sent: Wednesday, December 20, 2023 9:18 AM
To: cjarthur30@hotmail.com <cjarthur30@hotmail.com>
Subject: Water Permit Application

Rodriguez, Rachel

From: Craig Arthur <cjarthur30@hotmail.com>
Sent: Wednesday, December 20, 2023 9:36 AM
To: Rodriguez, Rachel
Subject: Re: [EXT] Water Permit Application
Attachments: Arthur twin brooks design 12-18-23.pdf

Here is an attached map from my irrigation salesman, it should have all the information you need. If this map isn't acceptable let me know, the existing well is marked on this map also by a white pin to the ne of the pivot. Whatever needs to be done to match this map is good with me. And yes adding existing well to page one is right there will not be a new well at this time as long as the performance of the old one is acceptable. if you have any more questions let me know thanks.

From: Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>
Sent: Wednesday, December 20, 2023 9:18 AM
To: cjarthur30@hotmail.com <cjarthur30@hotmail.com>
Subject: Water Permit Application

Good morning Craig,

I am in receipt of your application however, there are a few items I would like clarification on:

- The land to be irrigated totals to 102 acres and you have total acreage of 101.74. Is it okay if I correct total acreage to match at 102? You will not owe any additional money.
- Attached is a map, please mark the location of the well and outline the acres to be irrigated, then return to me.
- You indicated an existing well on page 2, is it okay to add "existing" to page 1 where you have the location of the well. Or are you in fact, adding another well?

Thank you,

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



Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Wednesday, December 20, 2023 9:18 AM
To: cjarthur30@hotmail.com
Subject: Water Permit Application
Attachments: map.pdf

Good morning Craig,

I am in receipt of your application however, there are a few items I would like clarification on:

- The land to be irrigated totals to 102 acres and you have total acreage of 101.74. Is it okay if I correct total acreage to match at 102? You will not owe any additional money.
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Thank you,

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





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8814-3, Craig Arthur**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Agriculture and Natural Resources concerning Water Permit Application No. 8814-3, Craig Arthur, 16116 456th Avenue, Watertown SD 57201.

The Chief Engineer is recommending APPROVAL of Application No. 8814-3 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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board with the following qualifications:

1. The well approved under Water Permit No. 8814-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Any replacement of the well authorized by Permit No. 8814-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund, Chief Engineer
February 13, 2024

Report to the Chief Engineer
On Water Permit Application No. 8814-3

Craig Arthur

February 13, 2024

Water Permit Application No. 8814-3 proposes to divert water at a maximum instantaneous diversion rate of 1.44 cubic feet of water per second (cfs) from one existing well completed into the Wilmot aquifer (approximately 80 feet deep) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31-T120N-R49W for the irrigation of 102 acres located in the NE $\frac{1}{4}$ of Section 6-T119N-R49W and the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31-T120N-R49W. The site of interest is located in Grant County approximately six miles southwest of Milbank, SD.

AQUIFER: Wilmot (WIL)

HYDROGEOLOGY:

The Wilmot aquifer is composed of Pleistocene-aged glacial and alluvium outwash deposits ranging from fine sand to coarse gravel (Thompson, 2001). The Wilmot aquifer has previously been estimated to underly approximately 152,900 acres in Grant and Roberts Counties in South Dakota, and the aquifer estimated to contain approximately 344,030 acre-feet of recoverable water in storage (Hedges et al., 1982). Hedges and others (1982) estimated areal extent for the Wilmot aquifer is currently the best information available since substantial drilling has not been completed. The South Dakota Geological Survey (SDGS) "Current Projects – Aquifer Delineation" webpage mentions an ongoing study in the northeast part of the state to more accurately map the boundaries of glacial outwash aquifers that lie east of the Coteau des Prairies, with the Wilmot aquifer being one of the five named aquifers under study (SDGS, 2024). The drilling and studies needed to refine aquifer delineations are multi-year projects. Review of nearby well logs (Water Rights, 2024d), observation well lithologic logs (Water Rights, 2024b), and conversations with SDGS staff aided in the determination that the existing well proposed to be used by this application is withdrawing from the Wilmot aquifer (Christensen and Mathiowetz, 2024). The SDGS study mentioned above has been ongoing for a few years and SDGS staff indicated the drilling working to refine the Wilmot aquifer boundaries in Grant and Roberts Counties should be completed within two years.

The Wilmot aquifer varies between confined and unconfined conditions (Water Rights, 2024b and 2024d). No water well or test hole completion report was submitted with Water Permit Application No. 8814-3. Well completion reports on file with the DANR-Water Rights Program for wells completed into the Wilmot aquifer within approximately one mile of the existing well site have saturated aquifer thicknesses ranging from approximately 15 to 20 feet, with the depth to the top of aquifer materials ranging from approximately 60 to 75 feet below the ground surface, and static water levels at well completion varying from approximately 20 to 30 feet below the ground surface (SDGS, 2024; Water Rights, 2024b and 2024d). The Wilmot aquifer is expected to be under confined conditions near the existing well site based on water well

completion reports, and the lithologic log on file for the nearby observation well (SDGS, 2024; Water Rights, 2024b and 2024d).

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

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

WATER AVAILABILITY:

Water Permit Application No. 8814-3 proposes to appropriate water from the Wilmot 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 Wilmot aquifer is not older than or stratigraphically lower than the Greenhorn Formation (Fahrenbach et al., 2010), and the applicant’s proposed use is not for use in a water distribution system as defined by SDCL 46-1-6(17). Therefore, the average annual recharge and average annual withdrawal rates to and from the Wilmot aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the Wilmot aquifer is primarily through the infiltration of precipitation where the aquifer is at or near the ground surface (Thompson, 2001).

An average annual recharge rate has not been estimated for the Wilmot aquifer. For buried, confined aquifers, Hedges and others (1985) recommended recharge rates of 0.15 to 0.60 inches per year for use by management and development programs. The areal extent of the Wilmot aquifer is approximately 152,900 acres when adding the estimates for Grant and Roberts Counties (Hedges et al., 1982); therefore, the average annual recharge rate to Wilmot aquifer ranges between approximately 1,911 to 7,645 acre-feet per year. Additional drilling and study of the Wilmot aquifer is expected to refine the estimated areal extent of the aquifer by Hedges and others (1982) which will likely affect the mathematics of the average annual recharge range.

Discharge

Discharge from the Wilmot aquifer is primarily through well withdrawals and evapotranspiration where the aquifer is at or near the ground surface (Thompson, 2001; Water Rights, 2024d).

Currently, there are five water rights/permits authorized to appropriate water from Wilmot aquifer (Water Rights, 2024c). Additionally, there is one future use permit (No. 4796-3) reserving 952 acre-feet of water annually from the Wilmot aquifer (Water Rights, 2024c). For the purpose of estimating average annual withdrawals, the future use permit is assumed to be fully developable for a total of 952 acre-feet per year.

Table 1 summarizes the non-irrigation water right authorized to appropriate water from the Wilmot aquifer, and future use permit reserving water, with the estimated annual use as determined by their permitted maximum diversion rate or annual volume. Historically, average water use by non-irrigation appropriations limited by an instantaneous diversion rate have been assumed to be pumping 60% of full time at the respective permitted diversion rate. Water rights/permits limited by an annual volume are assumed to withdraw their entire respective annual volume limitation. This is a standard method used by the DANR-Water Rights Program for estimating annual withdrawals by non-irrigation appropriations from an aquifer and is likely an overestimation of average annual withdrawals (Water Rights, 2024c). Overall, the estimated average annual withdrawal rate from the Wilmot aquifer by the non-irrigation water right and future use permit is approximately 1,534.1 acre-feet per year (Table 1) (Water Rights, 2024c).

Table 1. Non-irrigation water right authorized to divert water, and future use permit reserving water, from the Wilmot aquifer (Water Rights, 2024c)

Permit No.	Name	Status	Use	Authorized Acres if IRR	Authorized Diversion Rate (cfs)	Authorized Annual Volume (acre-feet/year)	Estimated Use (acre-feet/year)
4796-3	City of Sisseton	FU	MUN		10	952	952
5006-3	City of Sisseton	LC	MUN		1.34		582.1
LC: Licensed Water Right; FU: Future Use; MUN: Municipal						TOTAL:	1,534.1

Currently, there are four irrigation water rights/permits authorized to appropriate water from the Wilmot aquifer (Water Rights, 2024c). Irrigation water rights/permits have been typically required to report their annual usage on an irrigation questionnaire since 1979. The estimated average annual withdrawal rate for the Wilmot aquifer irrigation water rights/permits that have reported over the period of record (1979 to 2022) is approximately 145 acre-feet per year (Table 2) (Water Rights, 2024a). To reflect the current development of irrigation water rights/permits more accurately, the average annual withdrawal rate for irrigation appropriations from 2013 to 2022 is approximately 164 acre-feet per year (Table 2) (Water Rights, 2024a).

The average annual withdrawal rate for irrigation water rights/permits includes the reported withdrawal rates from now cancelled Water Right No. 2266-3 and Water Permit No. 4719-3, previously labeled as withdrawing from the Pleistocene Series: Unknown aquifer but are likely withdrawing from the Wilmot aquifer based on the information available from the in progress SDGS study (Christensen and Mathiowetz, 2024).

Table 2. Reported historic irrigation use from the Wilmot aquifer (Water Rights, 2024a)

Year	No. of Permits Reporting	Reported Pumpage (acre-feet)
1979	4	70.86
1980	5	257.72
1981	8	208.34
1982	7	218.86
1983	7	344.41
1984	7	282
1985	8	90
1986	8	0
1987	7	213
1988	8	371.7
1989	8	214.5
1990	8	156
1991	7	0
1992	7	65.5
1993	7	0
1994	7	0
1995	5	0
1996	5	100.98
1997	5	130
1998	5	170.01
1999	5	106.19
2000	5	164.89
2001	5	48.86
2002	5	39.6
2003	5	100.41
2004	5	107.95
2005	3	61.87
2006	4	209.87
2007	4	102.53
2008	4	89.49
2009	4	117.47
2010	4	167.04
2011	4	136.14
2012	4	397.61
2013	4	229.64
2014	4	132.93
2015	4	78.3
2016	4	155.04
2017	4	173.46
2018	4	204.97
2019	4	0
2020	4	238.55
2021	4	201.36
2022	4	227.99
Min	3	0
Max	8	397.6
Avg (1979 to 2022)	5	145
Avg (2013 to 2022)	4	164

There are domestic wells completed into the Wilmot aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2024d). Due to their relatively low diversion rates, withdrawals from domestic wells are generally not considered to be a significant portion of the hydrologic budget. Additionally, with the development of rural water systems in areas where the Wilmot aquifer is the uppermost aquifer available; it is likely some domestic users may have transitioned to rural water. Therefore, the quantity of water withdrawn by domestic wells is estimated to be negligible to the hydrologic budget for the Wilmot aquifer.

Hydrologic Budget Summary

The average annual recharge rate to Wilmot aquifer ranges between approximately 1,911 to 7,645 acre-feet per year. Additional drilling and study of the Wilmot aquifer is expected to refine the estimated areal extent of the aquifer by Hedges and others (1982) which will likely affect the mathematics of the average annual recharge range. The estimated average annual withdrawal rate from the Wilmot aquifer is approximately 1,800.1 acre-feet per year (non-irrigation (including future use reservation): 1,534.1 acre-feet/year; irrigation (avg 2013 to 2022): 164 acre-feet/year; Water Permit Application No. 8814-3 (if approved, assuming application rate of one foot per authorized acre): 102 acre-feet/year). Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the Wilmot aquifer for the proposed appropriation.

OBSERVATION WELL DATA:

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

Observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The DNR-Water Rights Program monitors four observation wells completed into the Wilmot aquifer (Water Rights, 2024b). The location of the observation wells in relation to the well the applicant proposes to use are RB-77O (approximately seventeen miles northwest), RB-77P (approximately sixteen miles northwest), RB-77Q (approximately fifteen miles northwest), and GT-76E (approximately one mile northwest) (as shown in Figure 5) (Water Rights, 2024b). The hydrographs for these observation wells are displayed in Figures 1 to 4 (Water Rights, 2024b). The data points utilized to construct the hydrographs are measurements of the static water level in the observation wells from the top of the well casing.

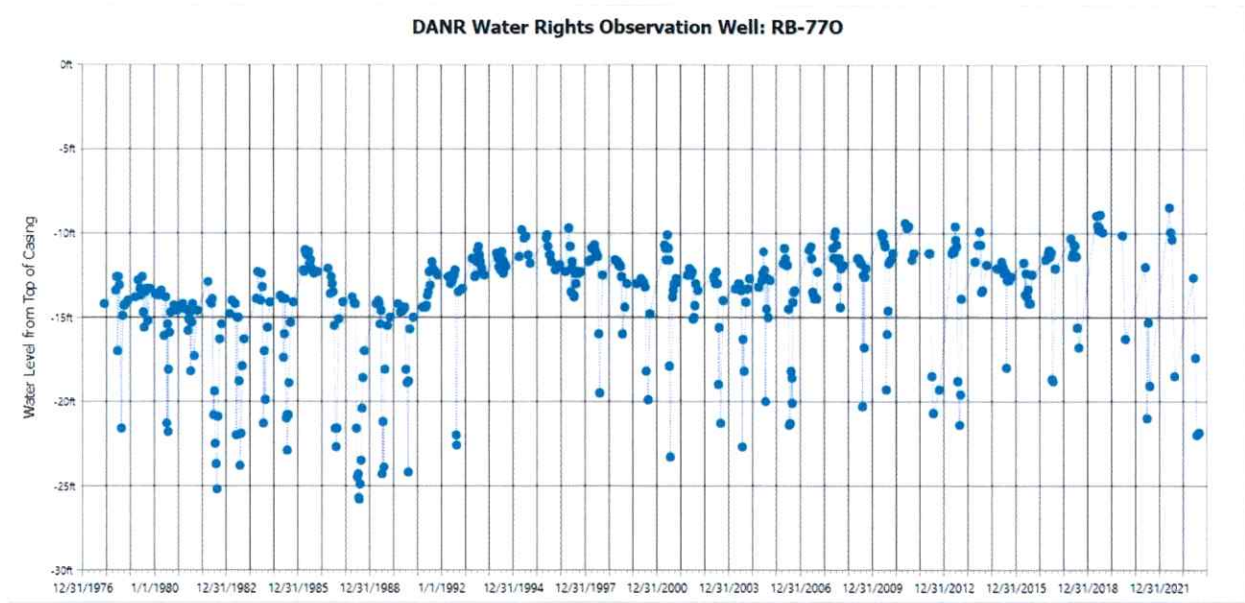


Figure 1. Hydrograph for observation well RB-77O (Water Rights, 2024b)

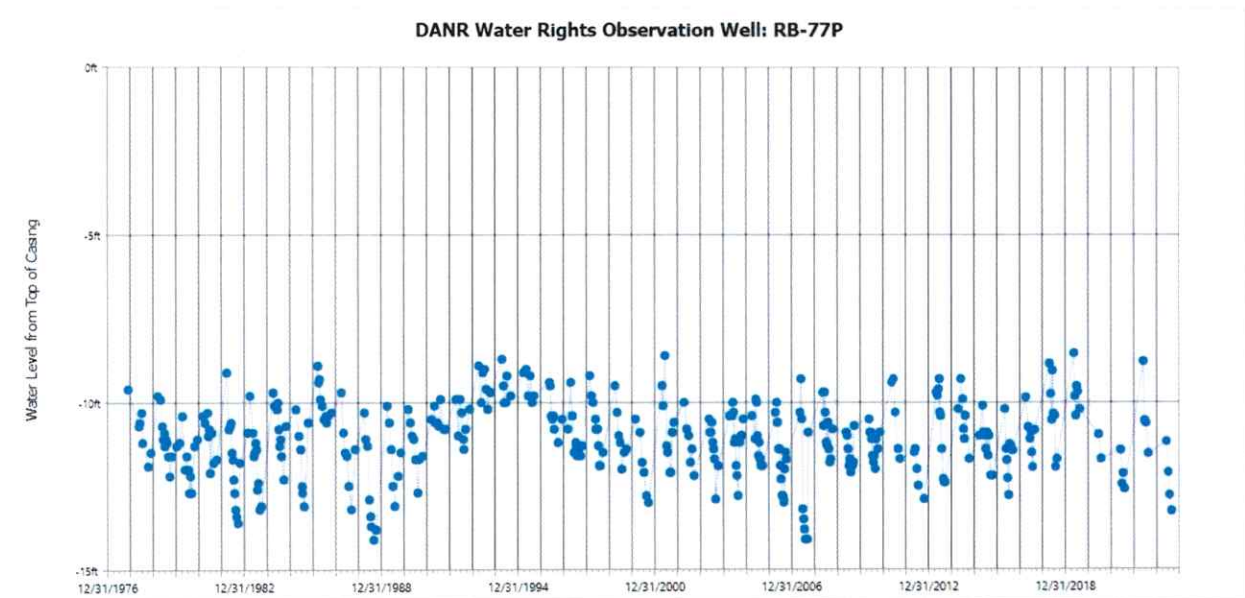


Figure 2. Hydrograph for observation well RB-77P (Water Rights, 2024b)

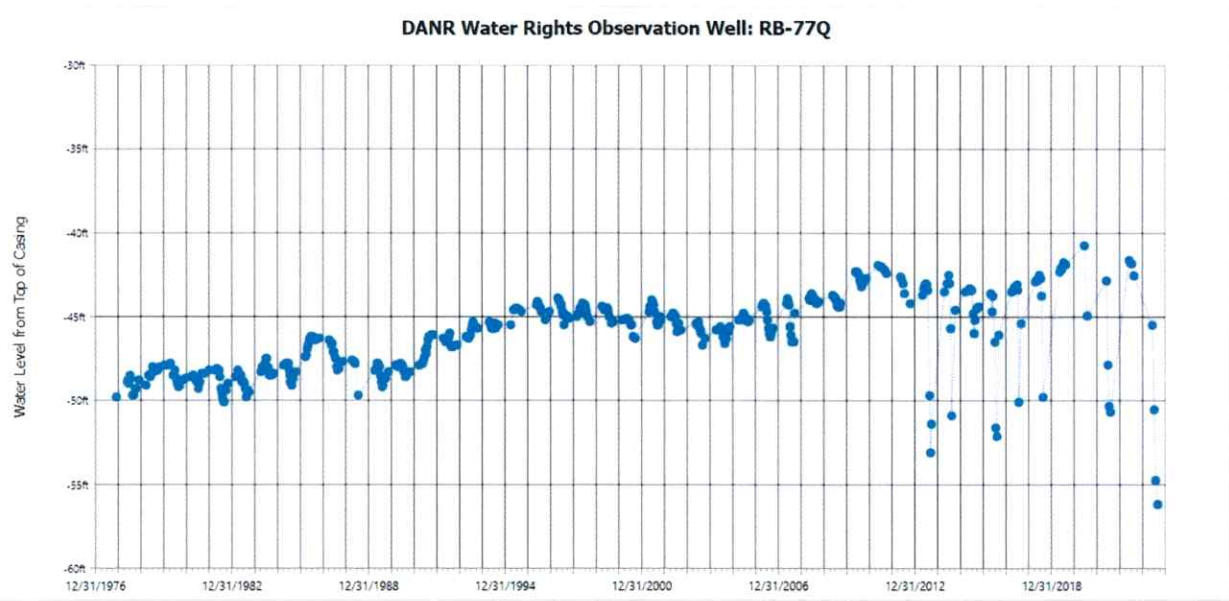


Figure 3. Hydrograph for observation well RB-77Q (Water Rights, 2024b)

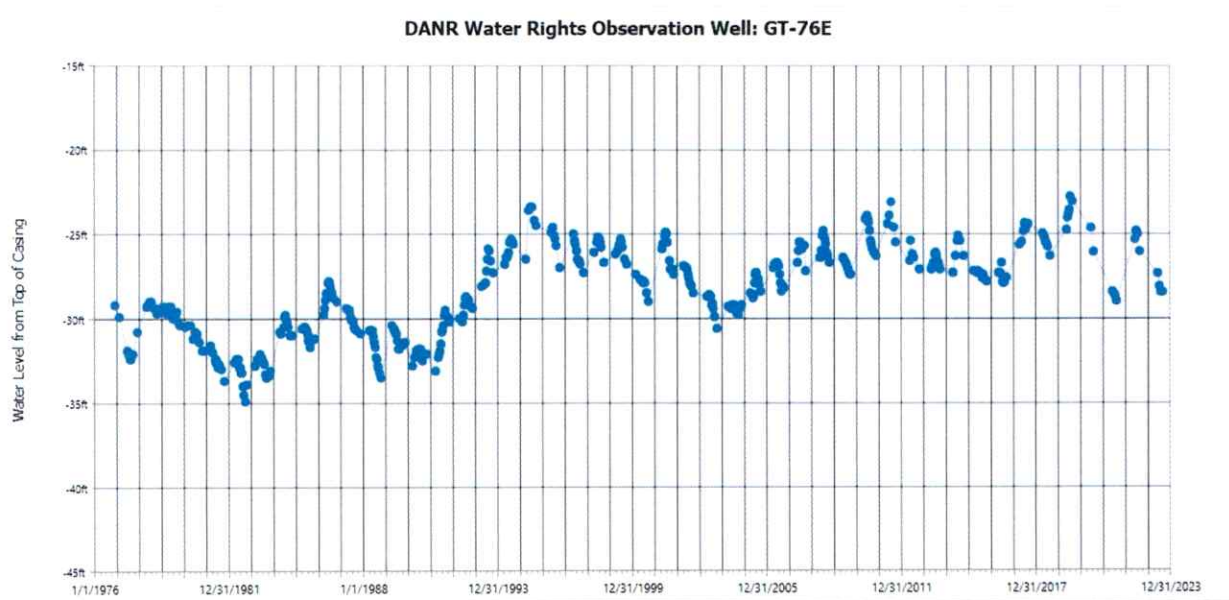


Figure 4. Hydrograph for observation well GT-76E (Water Rights, 2024b)

The hydrographs for the observation wells display stable to increasing water levels over their respective periods of record. The hydrographs for the Wilmot aquifer indicate that the aquifer responds well to climatic conditions because water levels are rising during wetter periods and declining to a stable water level during drier periods. Additionally, the water levels in the observation wells display that the amount of recharge to and natural discharge from the aquifer greatly exceeds pumping with the aquifer returning to pre-pumping conditions between irrigation seasons. Aquifer recovery indicates that climatic conditions and therefore, the effects of recharge to and natural discharges from the aquifer govern the long-term fluctuations of waters levels in

the aquifer rather than the impacts of pumping from the Wilmot aquifer. By recognizing that both recharge to and natural discharge from an aquifer can be captured for pumping, the observation well hydrographs demonstrate unappropriated water is available for the proposed appropriation.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are five water rights/permits authorized to appropriate water from the Wilmot aquifer, and one future use permit reserving water (Water Rights, 2024c). The closest water right/permit to the existing well site is Water Right No. 696-3, which is held by Brian Renelt. The diversion point for Water Right No. 696-3 is located approximately 17.5 miles northwest of the existing well site for this application (Table 3) (Figure 5) (Water Rights, 2024c).

There are domestic wells on file with the DANR-Water Rights Program that are completed into the Wilmot aquifer, with the closest domestic well on file (not held by the applicant) located approximately 0.8 miles northwest of the existing well site (Water Rights, 2024d). There could potentially be other domestic wells completed into the Wilmot aquifer near the well the applicant proposes to use that are not on file with the DANR-Water Rights Program. The location of the domestic wells in the well completion report database maintained by the Water Rights Program is based on the location listed by the driller on the well completion report.

Table 3. Water rights/permits authorized to withdraw water and future use permit reserving water from the Wilmot aquifer, as shown in Figure 5 (Water Rights, 2024c)

Permit No.	Name	Status	Use	Authorized Acres if IRR	Authorized Diversion Rate (cfs)	Authorized Annual Volume (acre-feet/year)
696-3	Brian Renelt	LC	IRR	289	3	
4788-3	Kent E Frerichs	LC	IRR	498	2.67	
4796-3	City of Sisseton	FU	MUN		10	952
5006-3	City of Sisseton	LC	MUN		1.34	
5194-3	Kent E Frerichs	LC	IRR	234	2	
6685-3	David Anderson	PE	IRR	55	0.89	
LC: Licensed Water Right; PE: Water Permit; FU: Future Use;						
IRR: Irrigation; MUN: Municipal						

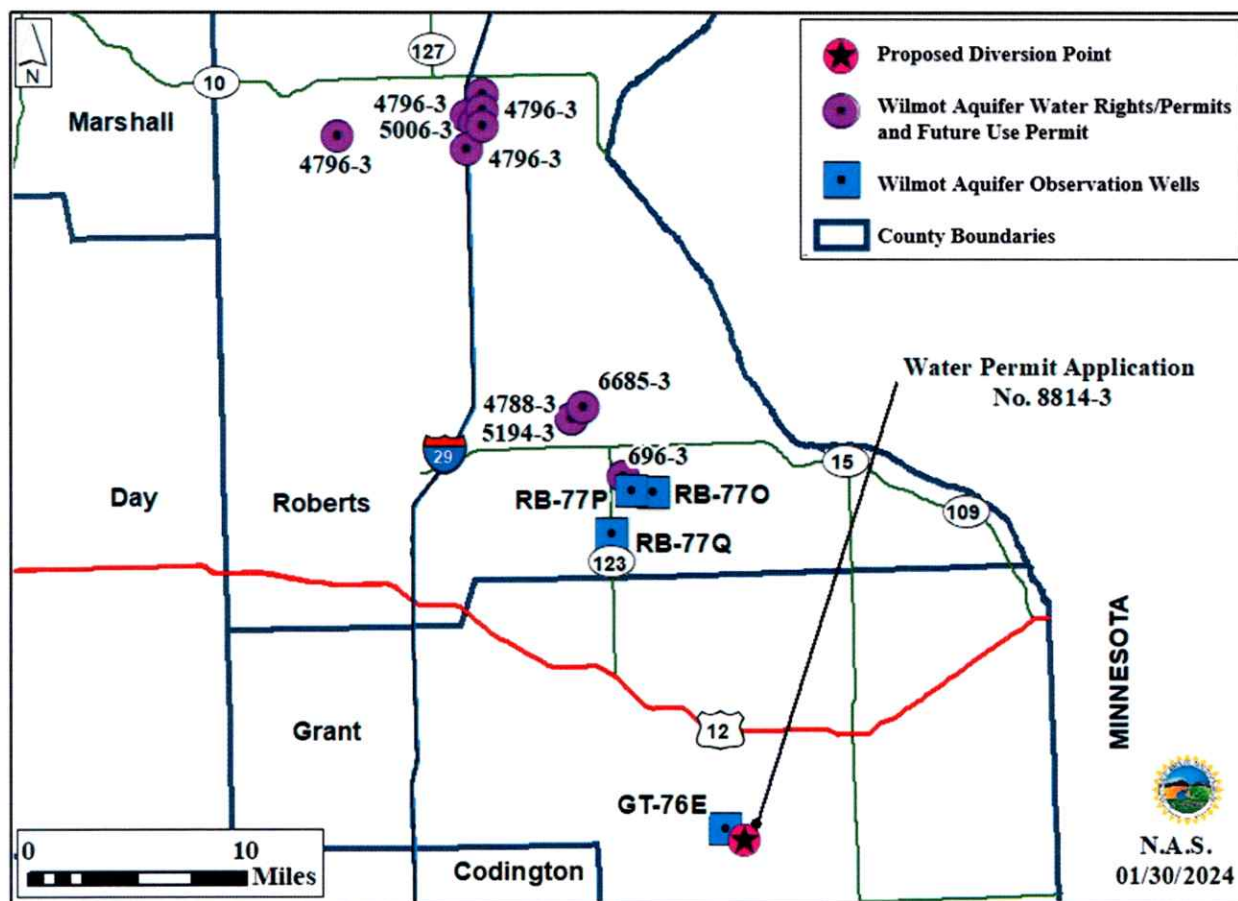


Figure 5. Location of the existing well proposed to be used by Water Permit Application No. 8814-3, with the Wilmot aquifer water rights/permits and observation wells (Water Rights, 2024b and 2024c)

The Wilmot aquifer varies between confined and unconfined conditions (Water Rights, 2024b and 2024d). The Wilmot aquifer is expected to be confined near the existing well site, based on nearby well completion reports, and the lithologic log on file for the nearby observation well (SDGS, 2024; Water Rights, 2024b and 2024d). The drawdown created by pumping a well generally does not extend far from the pumped well in an unconfined aquifer; however, in a confined aquifer, drawdown from pumping could extend a distance from the diversion point. The exact drawdown behavior of a well cannot be known without an aquifer performance test. However, observation wells completed into the Wilmot aquifer near permitted/licensed diversion points can provide some insight on how the aquifer responds to pumping.

Observation well RB-77Q (approximately fifteen miles northwest of the existing well site) has four high-yield (assumed to be a well with an authorized diversion rate greater than 0.2 cfs) irrigation wells within approximately six miles of it (Water Rights, 2024b and 2024c). The drawdown from pumping can be seen on the hydrograph for RB-77Q, along with the aquifer returning to pre-pumping conditions between irrigation seasons (Figure 3) (Water Rights, 2024b). The lithologic log on file for RB-77Q noted the well was drilled 165 feet deep below the ground surface, had a casing stick up height of approximately 1.5 feet, and the top of aquifer materials approximately 131 feet below the ground surface (SDGS, 2024). The lowest recorded

static water level on the hydrograph (displayed in Figure 3) is approximately 56 feet below the top of the well casing, which indicates there was still approximately 75 feet of artesian head pressure in RB-77Q even during drier periods when high-yield wells are expected to be pumping more water and when water levels are generally naturally lower in response to drier conditions (SDGS, 2024; Water Rights, 2024b).

Well completion reports on file with the DANR-Water Rights Program for wells completed into the Wilmot aquifer within approximately one mile of the existing well site have saturated aquifer thicknesses ranging from approximately 15 to 20 feet (SDGS, 2024; Water Rights, 2024d). The lithologic log on file for observation well GT-76E, approximately one mile northwest of the existing well site, has a saturated aquifer thickness of approximately 15 feet (SDGS, 2024; Water Rights, 2024b). This would not allow for enough thickness for a pump to be placed 20 feet below the top of the aquifer materials. To be considered an adequate well at this location, the inlet of the pump would need to be placed as near as practical to the bottom of the saturated aquifer to qualify as an adequate well under ARSD 74:02:04:20(6). Therefore, the applicant should control their withdrawals so that nearby adequate domestic wells and senior water rights/permits are able to access needed water. In Grant and Roberts Counties, there are no complaints on file with the DANR-Water Rights Program regarding well interference for adequate wells completed into the Wilmot aquifer (Water Rights, 2024e).

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

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

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use during the issuance of Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Board adopted the Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, “general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable...” (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered as an unlawful impairment, it would also conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to install or lower pumps depending on the specific characteristics of the Wilmot aquifer at their location. However, when considering the statutes (SDCL 46-1-4 and 46-6-6.1), rules (ARSD 74:02:04:20(6) and (7)), the artesian head pressure in observation wells completed into the aquifer, and the lack of well interference complaints for

adequate wells completed into the aquifer in Grant and Roberts Counties, any drawdown created from the proposed diversion is not expected to cause an unlawful impairment to existing water right/permit holders or domestic users with adequate wells. Therefore, there is a reasonable probability that any interference from the proposed appropriation will not impose unlawful impairments on existing users with adequate wells.

CONCLUSIONS:

1. Water Permit Application No. 8814-3 proposes to divert water at a maximum instantaneous diversion rate of 1.44 cfs from one existing well completed into the Wilmot aquifer (approximately 80 feet deep) for the irrigation of 102 acres. The site of interest is located in Grant County approximately six miles southwest of Milbank, SD.
2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the Wilmot aquifer to supply the proposed appropriation.
3. There is a reasonable probability that the proposed diversion by Water Permit Application No. 8814-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic users.
4. If this application is approved, a qualification requiring the applicant to control their water withdrawals, so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights, should be included.

Nakaila Steen

Nakaila Steen
Natural Resources Engineer II
SD DANR - Water Rights Program

Reviewed by:

Adam Mathiowetz

Adam Mathiowetz, PE
Natural Resources Engineer IV
SD DANR - Water Rights Program

References

- Christensen, WP., and Mathiowetz, A.W., 2024. Email Communication. South Dakota Geological Survey and SD DANR-Water Rights Program.
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- Water Rights, 2024a. "1979-2022 Irrigation Summaries by Aquifer", SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Water Rights, 2024b. Observation Well Data, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2024c. Water Right/Permit Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2024d. Well Completion Reports, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2024e. County Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

February 14, 2024

Craig Arthur
16116 456th Avenue
Watertown SD 57201

Dear Mr. Arthur:

Water Permit Application No. 8814-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Grant County Review printed in Milbank SD (Ph # 605 432-4516) and the Public Opinion printed in Watertown SD (see attachment for contact number). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Rachel Rodriguez

Rachel Rodriguez
Water Rights Program
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8814-3 to Appropriate Water

Notice is given that Craig Arthur, 16116 456th Avenue, Watertown SD 57201 has filed an application for a water permit to appropriate 1.44 cubic feet of water per second from one existing well completed into the Wilmot Aquifer (approximately 80 feet deep) located in the SE 1/4 SE 1/4 Section 31-T120N-R49W for irrigation of 102 acres located in the NE 1/4 Section 6-T119N-R49W and the SW 1/4 SE 1/4 Section 31-T120N-R49W. This site is located approximately 6 miles southwest of Milbank SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8814-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.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 this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by March 4, 2024.

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

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by March 4, 2024.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at the total approximate cost of _

Rodriguez, Rachel

From: Gannett Legals Public Notices 4 <ganlegpubnotices4@gannett.com>
Sent: Wednesday, February 14, 2024 2:44 PM
To: Rodriguez, Rachel
Cc: cjarthur30@hotmail.com
Subject: [EXT] 9856816 RE: 8814-3 Craig Arthur - Public Notice
Attachments: Order_Confirmation_Liners (57).pdf

Hello!

Please find your order confirmation and proof of ad attached.

Your notice is set to run in the Watertown Public Opinion on 2/21. The order cost is \$49.66 which includes an affidavit that will be sent to the Water Rights Program 7-10 business days after the last day of the ad printing. Please reply by 8am on Monday with any changes.

A bill will be sent to Craig Arthur. If prepayment is chosen instead, please call the number below my signature before 8am on Monday and reference order number 9856816. Anyone who answers can help you.

All orders are subject to a 3.99% service fee if paid with a credit card. As an incentive for customers, we provide a discount off the order cost equal to the 3.99% service fee if you pay with ACH. Pay by ACH and Save!
Final Order cost provided at time of payment and via a receipt.

Your notice is scheduled to run per your request and will publish unless you reply to this email requesting changes or to cancel.

Thank you!
Kerri Furnace
Public Notice Representative



Office: 844-254-5287

*NOTE: We are not legally trained, and it is your responsibility to make sure your AD meets the requirements of your State/Court which includes wording and publication times. Please verify all information is there and that it is correct. If your ad is not complaint with applicable law and needs to be re-published you will be responsible for all additional fees incurred.

From: Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>
Sent: Wednesday, February 14, 2024 10:43 AM
To: SD-Watertown Legals <legals@thepublicopinion.com>
Subject: 8814-3 Craig Arthur - Public Notice

Attached is a notice to be published on February 21, 2024.

Craig Arthur, 16116 456th Avenue, Watertown SD 57201, 605 880-0289, cjarthur30@hotmail.com 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 Ave, Pierre SD 57501.

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

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Wednesday, February 14, 2024 9:42 AM
To: gcreview@itcmilbank.com
Subject: 8814-3 Craig Arthur - Public Notice
Attachments: 8814-3 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on February 21, 2024.

Craig Arthur, 16116 456th Avenue, Watertown SD 57201, 605 880-0289 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 Ave, Pierre SD 57501.

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

Thank you,

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



Rodriguez, Rachel

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

Thank you,

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



Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Thursday, February 15, 2024 8:19 AM
To: Craig Arthur
Subject: RE: 8814-3 Craig Arthur - Public Notice
Attachments: 8814-3 Rec.pdf; 8814-3 Ltr.pdf; 8814-3 PubNotice.pdf; Public Opinion Info.pdf

Good Morning Craig,

Attached is a copy of the report, chief engineer's recommendation and information regarding the public notice for your water permit application. As stated in the letter, **please contact the paper(s) as soon as possible to authorize publication and arrange for payment.** This information is also being mailed to you today.

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

Thank you,

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



LOCALiQ

Aberdeen News
Watertown Public Opinion

PO Box 630567 Cincinnati, OH 45263-0567

PROOF OF PUBLICATION

Water Rights Program
Craig Arthur
16116 456Th AVE
Watertown SD 57201-7329

STATE OF SOUTH DAKOTA, COUNTY OF CODINGTON

The Watertown Public Opinion is, and during all the times hereafter mentioned was, a daily legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4, as amended, published at Watertown, Codington County, South Dakota, by Watertown Public Opinion; that the notice, order or advertisement, a printed copy of which is attached, was published in said newspaper in the issue dated:

02/21/2024

and that the fees charged are legal.
Sworn to and subscribed before on 02/21/2024

T. Nicole Jacobs
Legal Clerk
Keegan Moran
Notary, State of WI, County of Brown
2-14-28

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KEEGAN MORAN
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State of Wisconsin

**NOTICE OF
APPLICATION NO. 8814-3
to Appropriate Water**

Notice is given that Craig Arthur, 16116 456th Avenue, Watertown SD 57201 has filed an application for a water permit to appropriate 1.44 cubic feet of water per second from one existing well completed into the Willmot Aquifer (approximately 80 feet deep) located in the SE 1/4 SE 1/4 Section 31-T120N-R49W for irrigation of 102 acres located in the NE 1/4 Section 6-T119N-R49W and the SW 1/4 SE 1/4 Section 31-T120N-R49W. This site is located approximately 6 miles southwest of Milbank SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8814-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at

<https://danr.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 this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by March 4, 2024.

The petition shall include a statement describing the

unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at

<https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by March 4, 2024.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published \$49.66 and may be viewed free of charge at www.sdpublicnotices.com

Printer's Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF GRANT

} ss.

Holli Seehafer

RECEIVED

FEB 26 2024

OFFICE OF
WATER

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, _____ Owner _____ 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 No. 8814-3 to Appropriate
Water, Craig Arthur

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

<u>February 21</u>	<u>20</u>	<u>24</u>	<u>20</u>
	<u>20</u>		<u>20</u>
	<u>20</u>		<u>20</u>

That \$ 39.96, 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.

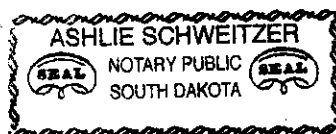
Holli Seehafer

Subscribed and sworn to before me this 21st day of Feb 20 24

Ashlie Schweitzer

Notary Public, Grant County, South Dakota

My Commission Expires:
September 21, 2027



Publication Fee \$ 39.96
Notarial Fee \$ _____
Total \$ 39.96

NOTICE OF APPLICATION NO.

8814-3 to Appropriate Water

Notice is given that Craig Arthur, 16116 456th Avenue, Watertown SD 57201 has filed an application for a water permit to appropriate 1.44 cubic feet of water per second from one existing well completed into the Wilnot Aquifer (approximately 80 feet deep) located in the SE 1/4 SE 1/4 Section 31-T120N-R49W for irrigation of 102 acres located in the NE 1/4 Section 6-T119N-R49W and the SW 1/4 SE 1/4 Section 31-T120N-R49W. This site is located approximately six miles south-west of Milbank SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8814-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duval for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by March 4, 2024.

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 _____

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

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by March 4, 2024.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at an approximate cost of \$39.96 and can be viewed free of charge at www.sdpublicnotices.com.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

MAR 13 2024

Craig Arthur
16116 456th Avenue
Watertown SD 57201

Dear Mr. Arthur:

Enclosed is Water Permit No. 8814-3 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.

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

Sincerely,

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

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

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

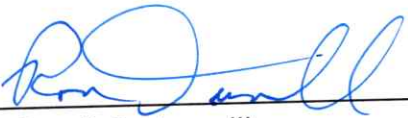
Pursuant to SDCL § 46-2A-4, public notice of the following application was posted on the DANR web site at <https://danr.sd.gov/public>. The posted public notice is the same notice as published in the pertinent newspaper(s) and a copy of the public notice is maintained in the application file. If the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

Application No.: 8814-3

Name of Applicant: Craig Arthur

Date of Posting: 2/16/2024

Date of Removal: 3/13/2024

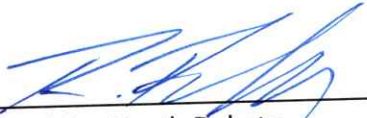


Ron Duvall, Engineer III

3/13/2024

Date

Subscribed and sworn to before me, a notary public, this 13th day of March, 2024.



Notary Public - South Dakota

My commission expires: **Rachel Rodriguez**
My Commission Expires
May 16, 2029



(SEAL)

Request for Change in Diversion Point

NAME & ADDRESS: Craig Arthur, 16116 456th Ave, Watertown SD 57201

DATE: 01/25/2024

COUNTY: Grant

COMMENTS:

Water Permit No. 8814-3 appropriates 1.44 cfs (650 gpm) from one existing well completed into the Wilmot Aquifer (approx. 80 ft deep) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 31 T120N, R49W, for the irrigation of 102 acres within the NE $\frac{1}{4}$ Section 6, T119N, R49W & SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 31, T120N, R49W.

After submitting the application for Permit No. 8814-3, it was found that the well intended to be used for diversion was in need of replacement. Mr. Arthur contacted the Water Rights Program and requested the approval of a new well being drilled to replace the old well (well authorized under cancelled WR 2266-3).

According to Mr. Arthur, the new well will be located adjacent to the Section line, between SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 31, T120N, R49W & NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 6, T119N, R49W and will be the same depth (approx. 80 ft) as the old well.

Well plugging information for the old well will be sent in accompaniment of Permit No. 8814-3

AUTHORITY

Pursuant to SDCL 46-5-31.1, the location of a diversion point may be changed, or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased.

- **Developed water source same as permitted source w/ no additional appropriation**
The water source remains the Wilmot Aquifer. The well depth is to be approximately 80 feet. No additional water is to be appropriated by this request. The well authorized by Permit No. 8814-3 appropriates 1.44 cfs (650 gpm). The submitted request reflects that no additional diversion rate authority is requested.
- **Review of Existing Diversion w/ Maps**
The Water Rights Program's database of Water Permits/Rights and Well Completion Reports were reviewed for wells less than 100 ft deep and within 2 miles.
The nearest well on file is 0.8 miles NW of the well authorized under Permit No. 8814-3.
There are 4 wells within 2 miles that meet the depth criteria (all domestic).
Permit No. 8814-3 is the only active Water Permit/Right diverting from the Wilmot Aquifer in Grant County.

CONCLUSION

- The new well location does not appropriate any additional water.
- The new well is to be completed into the Wilmot Aquifer.
- Interference is not expected to be a concern.
- Existing domestic wells will not be adversely impacted by the authorization of this well.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the replacement well/diversion point be authorized pursuant to SDCL 46/5-13.1.



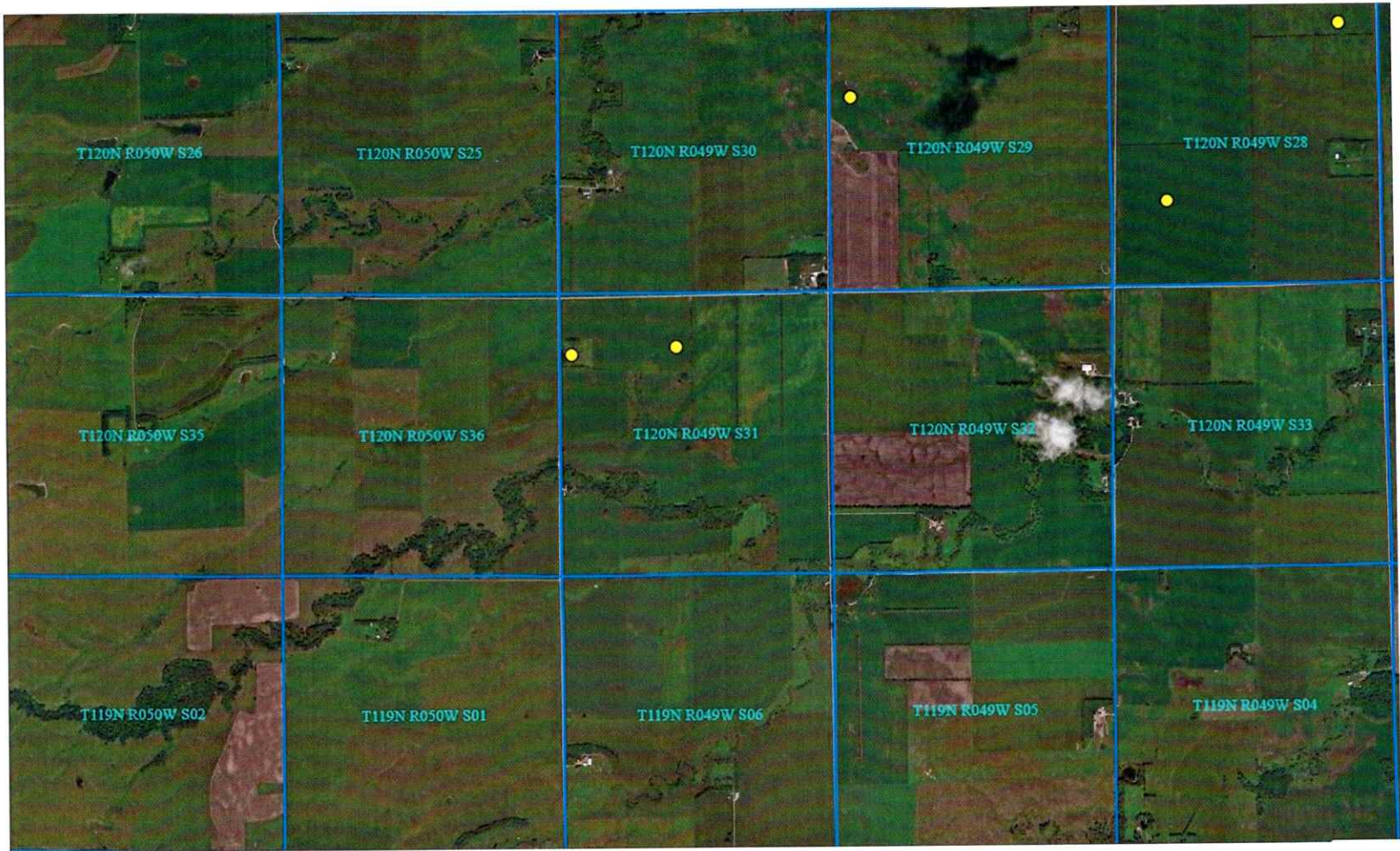
Mark Rath, Natural Resources Engineer
Water Rights Program

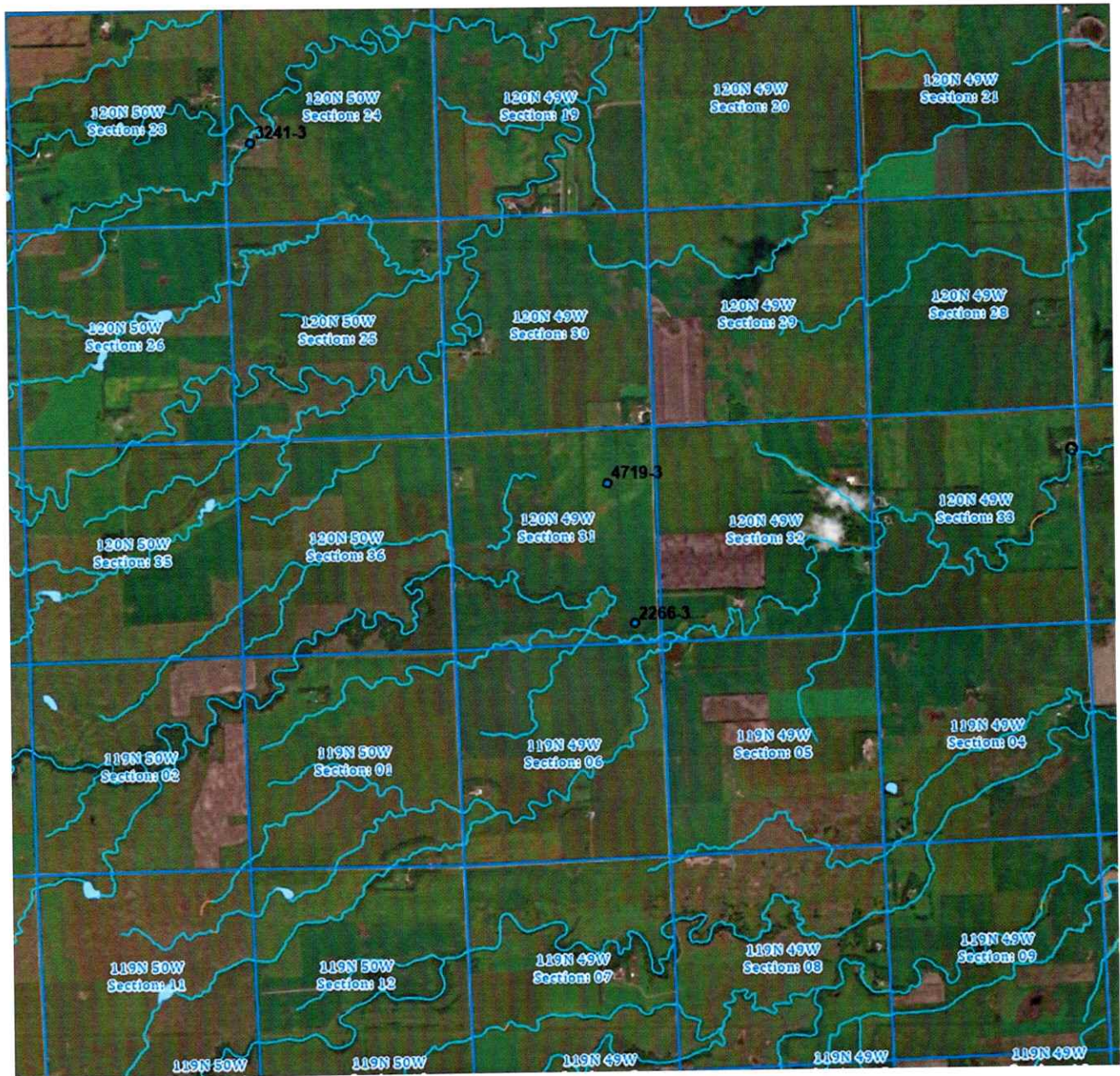
The Chief Engineer makes a finding pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.04 that:

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



Eric Gronlund, Chief Engineer
Water Rights Program





Water Permit No. 8814-3 wells

  Reply  Reply All  Forward  

Thu 03/14/2024 1:51 PM

AD

Dewell, Amanda

To Craig Arthur

 SD Licensed Driller & Pump Installers 12-5-23.pdf
223 KB

 8814-3_ChangeDVP.pdf
788 KB

Mr. Arthur,

Attached is your approved "Request for Change in Diversion Point" authorizing the construction of a new well for recently approved Permit No. 8814-3. The new well is to be completed into the Wilmot Aquifer (approx. depth 80 ft) located adjacent to the Section line, between the SE ¼ SE ¼ Sec 31-T120N-R49W & the NE ¼ NE ¼ Sec 6-T119N-R49W.

I've also attached a list of licensed well drillers.

The old well needs to be plugged in accordance with Confined Aquifer Plugging Rule 74.02:04:67

74:02:04:67. Requirements for plugging wells or test holes completed into confined aquifers or encountering more than one aquifer. All abandoned or forfeited wells or test holes that are completed into confined aquifers or that encounter more than one aquifer must be plugged with bentonite grout if the weight of the bentonite grout column is sufficient to overcome the bottom hole pressure or must be plugged with cement grout placed from the bottom of the well or hole to within eight feet of the ground surface. Cement grout must be placed from eight feet below ground surface to within three feet of the ground surface. The top three feet may be filled with native material. If a pipe cannot be lowered inside the well casing to place grout from the bottom to the top, the well may be plugged by making a tight connection to the top of the casing and pumping a volume of cement grout, sufficient to fill the well, under pressure into the well. Bentonite grout may not be used if the well must be plugged by making a tight connection to the top of the casing and pumping the grout in under pressure. If it cannot be verified that a well's casing was grouted in accordance with this chapter, an effort must be made to plug the annulus from the bottom of the annulus up to the ground surface with the same type of material or materials required for plugging inside the casing.

Source: 12 SDR 50, effective September 29, 1985; 13 SDR 129, 13 SDR 141, effective July 1, 1987; 18 SDR 224, effective July 16, 1992.

General Authority: SDCL [46-2-5](#), [46-6-6.1](#), [46-6-9](#), [46-6-20](#), [46-6-27](#).

Law Implemented: SDCL [46-2-9](#), [46-6-6.1](#), [46-6-10](#), [46-6-14](#), [46-6-18](#), [46-6-20](#), [46-6-27](#), [46-6-28](#).

Note: Bentonite manufactured for use as a drilling fluid does not meet the requirements for bentonite grout. Bentonite grout may be used to plug wells at depths greater than eight feet. The driller should be aware of the limitations inherent in bentonite grout. The low density of bentonite grout may make it inappropriate for use as a plug when higher hydrostatic pressure is required.

If you have any questions regarding plugging of the old well or construction of the new well, please contact our Groundwater Engineer, Adam Mathiowetz, Adam.Mathiowetz@state.sd.us, 605.773.3352

Thank you,

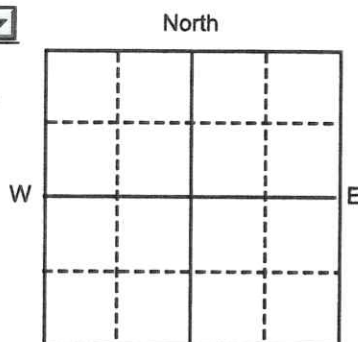
Amanda Dewell
DANR - Water Rights Program
Main Phone: 605 773-3352
Website: danr.sd.gov



8814-3

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 31 Twp 120 Rg 49County GRANTPlease mark well
location with an "X"

Well Completion Date

6/27/2024

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

MUD ROTARY

CASING DATA:

If other describe ☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>12</u> IN	<u>0</u> FT	<u>59</u> FT	<u>16</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>BENTONITE</u>	<u>16</u>	Lb/gal	<u>0</u> Ft	<u>55</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12 Inches Length 20 FeetMaterial Stainless SteelSlot Size .040 Set From 59 Feet to 79 Feet

Other information

WAS A PACKER OR SEAL USED? ☐ Yes ☐ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorinated☐ No, Why Not?Lab to which water
quality sample sent for analysisWell Owner: CRAIG ARTER

Business Name:

Address: 16116 456TH AVECity, State, Zip: WATERTOWN ☒ SD ☒ 57201

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL/ GRAVEL	0	11
BLUE CLAY/ FINE SAND	11	29
BLUE CLAY	29	45
FINE SAND/ BLUE CLAY	45	53
MED/ FINE SAND	53	56
CLAY BLUE	56	56.5
MED / FINE SAND/ GRAVEL GRAY	56.5	79.5
GRAY CLAY	79.5	80

STATIC WATER LEVEL 2' 10" FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe: AIRLIFTED
☐ Bailed
☒ Other

RECEIVED

AUG 30 2024

Pumping Level Below Land Surface

42' 7" Ft. After 6 Hrs. pumped 400 GPM

Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

GPS N 45 9.0080 W 96 44.728012" WELL - IRRIGATIONThis well was drilled under license # 475 and this
report is true and accurate.Drilling firm: THEIN WELL COMPANY, INCORPORATED

Signature of License Representative:

Michael Thein

Signature of Well Owner or Equitable Property Holder:

Date:

Craig Arther- 12" well Twin Brooks

Write a description for your map

Legend

 Craig Arther

Craig Arther Th # 1 111'
Th # 2 79.5'

Craig Arther 79' 12" well

1154th St

N

900 ft

Google Earth