

WATER PERMIT NO. 8671-3

Name of Applicant: Jim & Darlene Nagel Joint Revocable Trust

Address: 40381 309th St, Avon SD 57315 Phone: 605 661-6371

Amount of Water Claimed: 1.56 cfs Total Acres: 113

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation County: Bon Homme

Type of Waste Disposal System:

Location: 7 miles southwest of Avon

PRIORITY Date Received: 10-28-22 Application/License Fee: \$950

Corrected Application Received: Period of Annual Use: April 1 – November 30

Remarks:

Diversion Point: Approximate center of NE 1/4
Sec 6-T93N-R61W

Land to be Irrigated: NE 1/4 Sec 6-T93N-R61W

Depth of Well: 190 feet

Well Driller: Christensen Well & Irrigation

Remarks:

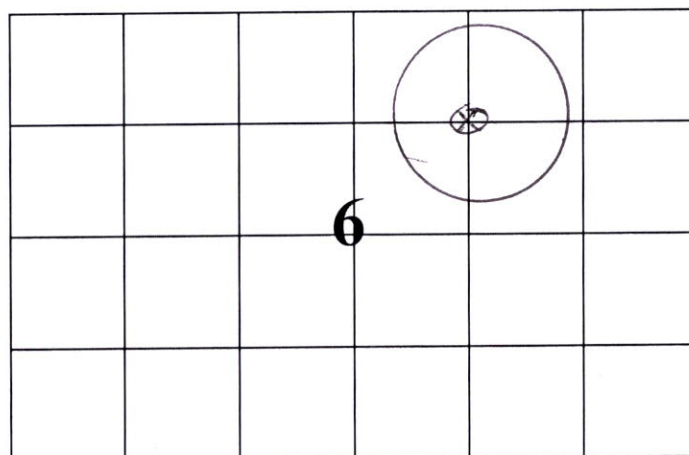
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 10-28-22

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



**SOUTH DAKOTA
WATER PERMIT NO. 8671-3**

Date of first receipt of application October 28, 2022.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8671-3 to Jim and Darlene Nagel Joint Revocable Trust, c/o Jim Nagel, 40381 309th St, Avon SD 57315 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. 8671-3 appropriates 1.56 cubic feet of water per second from one well to be completed into the Choteau West Aquifer (186.5 feet deep) located in the center of NE 1/4 Section 6 for irrigation of 113 acres located in the NE 1/4 Section 6; all in T93N-R61W. This site is located approximately 7 miles southwest of Avon 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: April 1 – November 30.
3. The date from which applicant may claim right is October 28, 2022.
4. The date of approval of Permit No. 8671-3 is January 16, 2023.
5. One-fifth of the construction is to be completed on or before July 16, 2025.
6. All construction is to be completed on or before January 16, 2028.
7. Water is to be put to beneficial use on or before January 16, 2032.
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. 8671-3 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. 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

FEB 17 2023
date



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

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8671-3</u> (office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri River</u>
	Newspaper <u>Tyndall Tribune & Register</u>
	<u>Press & Dakotan</u>

PAID

OCT 28 2022

CK# 10705

RECEIVED

OCT 28 2022

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 Jim and Darlene Nagel Joint Revocable Trust

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

Mailing Address 40381 309th St Avon S.D. 57315
(Address) (City) (State) (Zip Code)Phone 605-286-3771 Mobile 605-661-6371 Email dnagel256@gmail.com2. Amount of water claimed 1.56 *CFS or 700 **GPM ***AF Total Acreage 113
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)3. Source of water supply 1 well4. Location of point of diversion 6-93N-61W-BonHomme Center of NE 8T,
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
County Bon Homme5. County or counties where water will be used Bon Homme6. Annual period during which water is to be used April 1 to November 307. 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
<u>North East 8th corner</u>	<u>113</u>		
<u>Sec 6-T93N-R61W</u>			

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

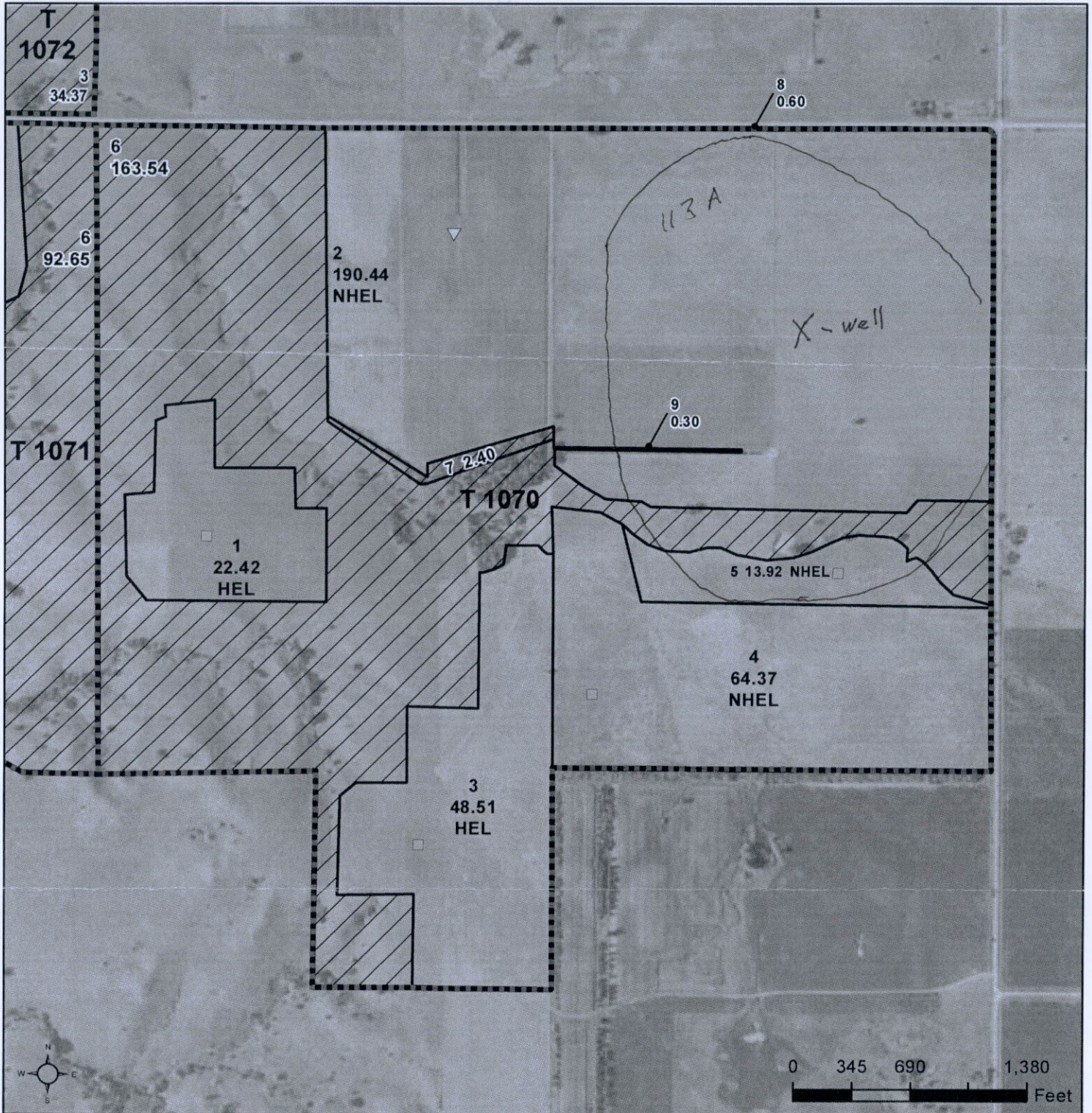
I, Jim Nagel, Trustee, the applicant, certify under
Name of Person Title (if applicable)

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.



United States
Department of
Agriculture

Bon Homme County, South Dakota



Common Land Unit Tract Boundary
 Non-Cropland
 Cropland
 PLSS

Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

Unless otherwise noted,
crops listed below are:
Non-irrigated
Intended for Grain
Corn = Yellow
Soybeans = Common
Wheat - HRS or HRW
Sunflowers = Oil or Non-oil

Producer initial _____
Date _____

2022 Program Year

Map Created March 28, 2022

Farm 7160

6-93N-61W-Bon Homme

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).

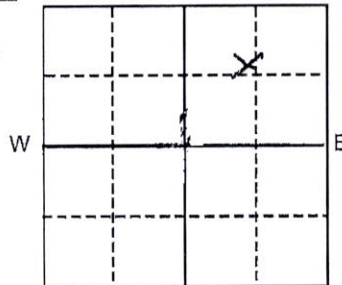
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW 1/4 NE 1/4 Sec 6 Twp 93N Rg 64WCounty Bon Homme

North

Please mark well location with an "X"



Well Completion Date

10-20-22

1 Mile

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

4300 ft. from Septic Tank (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>160</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>106.5</u> FT	<u>28</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>Cement</u>	<u>70</u>	Lb/gal	<u>0</u> Ft	<u>22</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Pumped down with Pressure grouter

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 16" Inches Length 80 FeetMaterial pvcSlot Size .085 Set From 106.5 Feet to 186.5 Feet

Other information

WAS A PACKER OR SEAL USED? ☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorine☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: James Nagel

Business Name:

Address: 40381 309th St. AveCity, State, Zip: Auron SD 57315

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Brown top Soil</u>	<u>0</u>	<u>6</u>
<u>Clay & Gravel</u>	<u>6</u>	<u>13</u>
<u>Rocks</u>	<u>13</u>	<u>15</u>
<u>Clay, Gravel, Rocks</u>	<u>15</u>	<u>76</u>
<u>Blue Clay</u>	<u>76</u>	<u>158</u>
<u>Medium Gravel</u>	<u>158</u>	<u>167</u>
<u>Coarse Gravel</u>	<u>167</u>	<u>182</u>
<u>Rocks</u>	<u>182</u>	<u>185</u>
<u>Shale</u>	<u>185</u>	<u>190</u>

STATIC WATER LEVEL 99' 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: Pumped w/ turbine pump
☐ Bailed
☐ Other test pump w/ engine

Pumping Level Below Land Surface

112 Ft. After 3 Hrs. pumped 750 GPM

Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

RECEIVED

OCT 24 2022

OFFICE OF

WATER

This well was drilled under license # 444 and this report is true and accurate.Drilling firm: Christensen Well & Irrigation

Signature of License Representative:

Carly Christensen

Signature of Well Owner or Equitable Property Holder:

Date: 10/20/22

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date October 28, 2022

RECEIVED OF James C. Nagel 40381 309th St., Avon SD 57315

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

Fee for Application for Permit No. <u>8671-3</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>8671-3</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

vm



**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. 8671-3, Jim and Darlene Nagel Joint Revocable Trust**

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. 8671-3, Jim and Darlene Nagel Joint Revocable Trust, c/o Jim Nagel, 40381 309th Street, Avon SD 57315.

The Chief Engineer is recommending APPROVAL of Application No. 8671-3 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. 8671-3 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. 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
December 27, 2022

Report to the Chief Engineer

On Water Permit Application No. 8671-3

Jim & Darlene Nagel Joint Revocable Trust

December 28th, 2022

Water Permit Application No. 8671-3 proposes to appropriate 1.56 cubic feet of water per second (cfs) from one well (186.5 feet deep) completed into the West management unit of the Choteau aquifer located in the center NE ¼ Section 6 for irrigation of 113 acres located in the NE ¼ Section 6; all in T93N-R61W. The site of interest is located approximately 7 miles southwest of Avon, SD in Bon Homme County.

AQUIFER: Choteau: West (CH:W)

HYDROGEOLOGY:

The West management unit of the Choteau aquifer was referred to as the Choteau aquifer by Christensen (1970), Jorgensen (1971), and Kume (1977). The Choteau: West aquifer naming convention will be used in this report as it was established by Hedges et al (1982) and accepted by the Water Management Board. The Choteau: West aquifer is a glacial outwash deposit composed of sand and gravel that underlies surface water sources and surficial till layer (Jorgensen, 1971; Kume, 1977). Hedges et al (1982) estimated that the Choteau: West aquifer underlies approximately 218,400 acres of Bon Homme, Charles Mix, and Douglas Counties and contains an estimated 1,474,200 ac-ft of recoverable water in storage. Hedges et al. (1985) states the Choteau: West aquifer to be a confined aquifer but Jorgensen (1971) and Kume (1977) identify some unconfined portions occur in the aquifer near the hydrological connections to surface water sources (Choteau Creek and Dry Choteau Creek).

A water well completion report is available for Water Permit Application No. 8671-3 (Water Rights, 2022d). The well was completed into the Choteau: West Aquifer on October 20th, 2022 and its location is shown on Figure 1. The well is completed into the Choteau: West aquifer and has a saturated aquifer thickness of 27 feet, with the depth to the top of aquifer material at 158 feet below the ground surface, and static water level at 99 feet below the ground surface at the time of well completion (SDGS, 2022; Water Rights, 2022b and 2022d). Based on water well completion reports near the diversion point and the well completion report for the well, the Choteau: West aquifer is expected to be confined at the diversion point (SDGS, 2022; Water Rights, 2022b and 2022d).

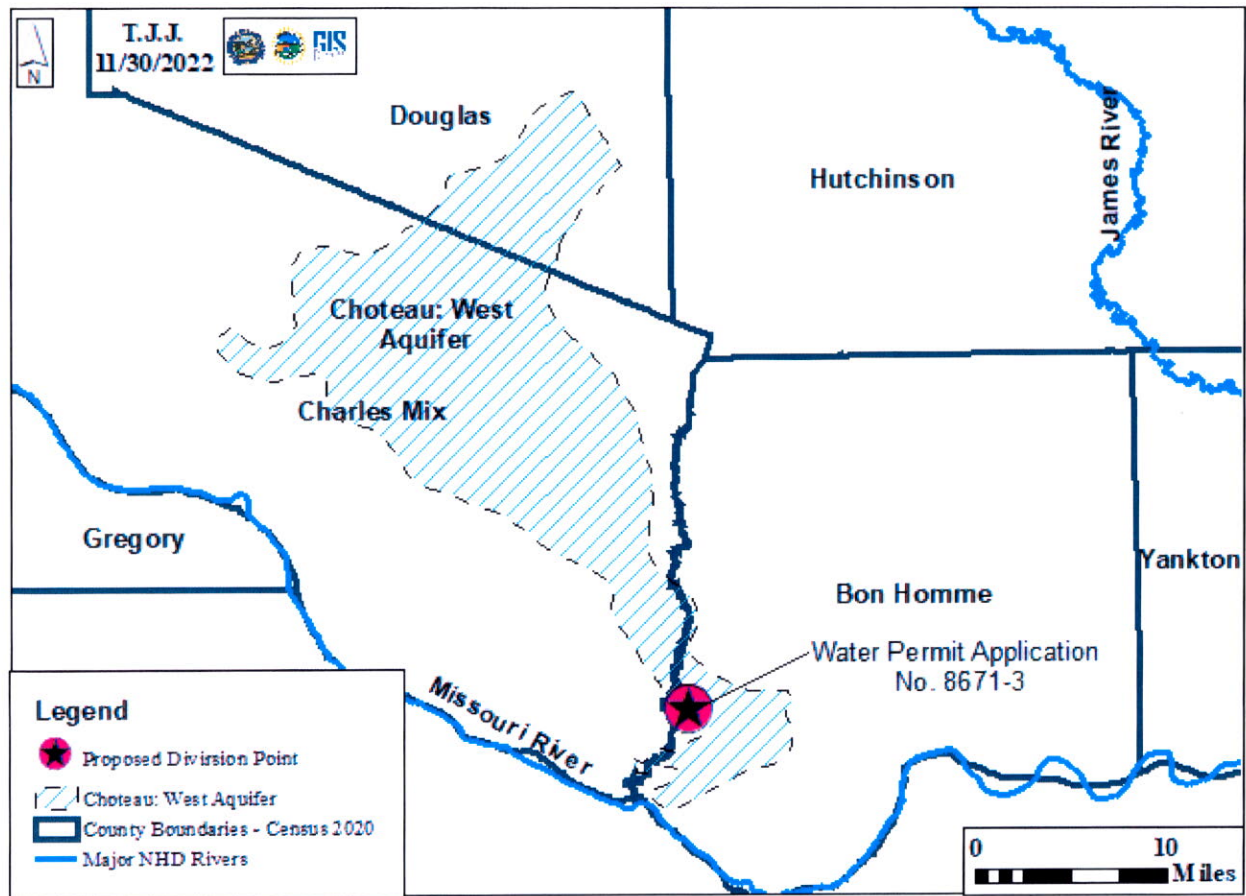


Figure 1. Map of the area Choteau: West aquifer (Water Rights, 2022b and 2022c), and the location of diversion point for Water Permit Application No. 8671-3.

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 unappropriated water is available for the applicant’s proposed use, the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, the proposed use is a beneficial use, and the permit is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board as defined by §§ 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 uses and water rights within the Choteau: West aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8671-3 proposes to appropriate water from the Choteau: West 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 Choteau: West aquifer is not older than or stratigraphically lower than the Greenhorn Formation, 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 Choteau: West aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the Choteau: West aquifer is received primarily through infiltration of precipitation where the aquifer is exposed to the surface, groundwater inflow from hydrologically connected bedrock aquifers, and seepage through till layers from Choteau Creek and Dry Choteau Creek (Jorgensen, 1971; Kume, 1977). Using observation well analysis Hedges et al (1985) estimated a recharge rate of 4.1 inches per year for unconfined portion of the Choteau: West aquifer. The unconfined area for this primarily confined aquifer has not been delineated, therefore the Choteau: West aquifer will be evaluated as a confined aquifer. Hedges et al (1985) recommend using a recharge rate of 0.15 in/yr to 0.6 in/yr for confined aquifers to be used by management and development programs. The Choteau: West aquifer has an estimated areal extent of approximately 218,400 acres (Hedges et al, 1985). Therefore, the average annual recharge rate (based on Hedges et al, 1985) ranges from 2,730 acre-feet/year to 10,920 acre-feet/year.

Discharge

Discharge from the Choteau: West aquifer in South Dakota primarily occurs through well withdrawals, seepage to surface water features, and evapotranspiration in areas where the aquifer is at or near land surface. Currently, there are 53 water rights/permits authorized to appropriate water from the Choteau: West aquifer (Water Rights, 2022c). There are no future use permits reserving water from the Choteau: West aquifer (Water Rights, 2022c).

Table 1 summarizes the 6 non-irrigation water rights/permits authorized to appropriate water from the Choteau: West aquifer with the estimated annual use for each water right/permit as determined by their limiting diversion rate or annual volume. The amount of water 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 will pump at their maximum permitted diversion rate for 60 percent of the time. This is a standard method used by the DANR-Water Rights Program for estimating average annual withdrawals by non-irrigation appropriations. Overall, the estimated average annual withdrawal rate for the Choteau: West aquifer non-irrigation water rights/permits is approximately 351 acre-feet/year (Table 1) (Water Rights, 2022c). The City of Wagner is connected to a rural water system and maintains Water Right Nos. 569-3 and 1782-3 for standby purposes (Drinking Water, 2022). Therefore, water use under these rights is estimated to be negligible.

Table 1. Estimated annual use for non-irrigation water rights/permits authorized to divert water from the Choteau: West aquifer (Water Rights, 2022c)

Permit Number	Name	Use	Status	Diversion Rate (cubic feet/second)	Estimated Use (acre-feet/year)
7276-3	SPARKS	COM	LC	0.134	58.2
7403-3	VANDERLEI	DOM	LC	0.075	32.6
1782-3	CITY OF WAGNER	MUN	LC	0.890	0
569-3	CITY OF WAGNER	MUN	LC	1.100	0
296-3	AHRENS	REC, DOM	LC	0.300	130.3
297-3	AHRENS	REC	LC	0.300	130.3
LC License, COM Commercial, DOM Domestic, MUN Municipal, REC Recreation				TOTAL:	351

Currently, there are 47 irrigation water rights/permits appropriating water from the Choteau: West aquifer (Water Rights, 2022c). Irrigation water rights/permits have been typically required to report their annual usage on an irrigation questionnaire since 1979. The average annual withdrawal rate for the Choteau: West aquifer irrigation water rights/permits that have reported over the period of record (1979 to 2021) is approximately 2,489 acre-feet per year (Table 2) (Water Rights, 2022a). To reflect the current development of irrigation water rights/permits more accurately, the average annual withdrawal rate for irrigation appropriations from 2012 to 2021 is approximately 3,029 acre-feet per year (Table 2) (Water Rights, 2022a).

Water Permit No. 8575-3 was approved in 2022, and is not accounted for in Table 2, (Water Right, 2022c). Water Permit No. 8575-3 is authorized to irrigate 124 acres (Water Rights, 2022c). Generally, irrigators in eastern South Dakota apply less than one foot of water per acre per year. However, to account for fluctuation in wet and dry cycles from year to year, the one foot of water per acre per year application rate will be used to somewhat overestimate the annual withdrawal rate for this irrigation water permit. Therefore, the estimated average annual withdrawal rate for Water Permit No. 8575-3 is approximately 124 acre-feet per year. Water Permit Application No. 8671-3 plans to irrigate 113 acres, by using the same one foot of water per acre per year estimate, Application No. 8671-3 should withdraw approximately 113 acre-feet per year. Collectively, the average annual withdrawal rate for the irrigation appropriations from 2012 to 2021 (3,029 acre-feet/year), plus the estimated average annual withdrawal rate for the irrigation water permit approved in 2022 and this application (237 acre-feet/year), is approximately 3,266 acre-feet per year.

Table 2. Reported historic irrigation uses from the Choteau: West aquifer (Water Rights, 2022a)

Year	No. of Permits Reporting	Reported Pumpage (acre-feet)
1979	49	2,933
1980	47	2,644
1981	48	3,132
1982	39	1,647.15
1983	40	1,368.89
1984	44	1,692
1985	43	2,377
1986	42	2,986
1987	42	2,198.00
1988	44	4,537.40
1989	45	3,984.10
1990	45	3,716.00
1991	45	4,057
1992	46	1,683
1993	45	334.2
1994	41	2,026.03
1995	42	999.46
1996	42	1,795.61
1997	42	1,509
1998	42	697.51
1999	40	1,248.07
2000	33	3,009.11
2001	33	1,625.24
2002	33	3,223.92
2003	33	2,526.26
2004	34	2,819.08
2005	36	2,896.82
2006	36	3,598.83
2007	34	3,363.59
2008	34	2,443.95
2009	35	1,163.81
2010	35	614.83
2011	35	1,872.77
2012	33	6,042.81
2013	43	4,141.10
2014	45	3,966.34
2015	46	4,306.86
2016	44	2,800.67
2017	47	3,323.18
2018	45	122.39
2019	46	285.39
2020	46	1,565.85
2021	46	3,739.86
Max	49	6,042.81
Min	33	122.39
Avg (1979-2021)	41	2,489
Avg (2012-2021)	44	3,029

There are domestic wells completed into the Choteau: West aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2022d). 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 Choteau: West 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 Choteau: West aquifer.

Hydrologic Budget Summary

The average annual recharge rate to the Choteau: West aquifer has a range from 2,730 acre-feet/year to 10,920 acre-feet/year. The estimated average withdrawal rate from the Choteau: West aquifer totals to approximately 3,617 acre-feet/year; (non-irrigation: 351 acre-feet/year; irrigation (2012 to 2021 plus the water rights/permits approved in 2022 and this application): 3,266 acre-feet/year). Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the Choteau: West 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.

The DNR-Water Rights Program monitors 25 observation wells completed into the Choteau: West aquifer, with observation wells in the area of this application shown on Figure 5, (Water Rights, 2022b). These observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The 3 closest observation wells to the diversion point are BH-78C (approximately 2.3 miles east), BH-82D (approximately 2.3 miles southeast), and BH-78D (approximately 4.3 miles southeast) (Water Rights, 2022b). The hydrographs for these observation wells are displayed in Figures 2 to 4 respectively (Water Rights, 2022b). The data points utilized to construct the hydrographs are measurement of the static water level in the observation wells from the top of the well casing. It is worth noting the hydrograph titles display DENR Water Rights Observation Well on the hydrographs when the titles should display DNR Water Rights Observation Well on hydrographs. A majority of the observation wells in the Choteau: West aquifer have a stable trend in the water level. Although, there are a few observation wells that have been on a slight decline since 2010. This is most likely due to recent authorization of water rights in close proximity to the observation wells. Despite the decline, the aquifer reaches a stable trend at a lower water level than previous years. The data shown on Figures 2 to 4 share a similar trend with most of the other observation wells in the Choteau: West aquifer. However, there are a few observation wells that seem to have their hydraulic head strongly impacted by surface water sources, such as the Choteau Creek (Water Rights, 2022b).

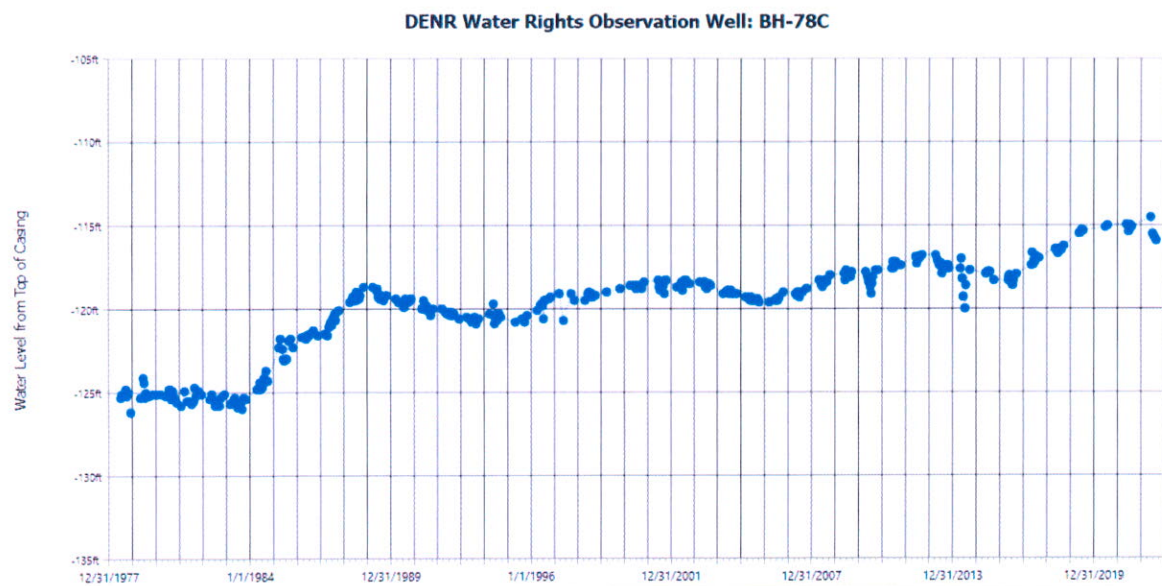


Figure 2. Hydrograph for observation well BH-78C (Water Rights, 2022b)

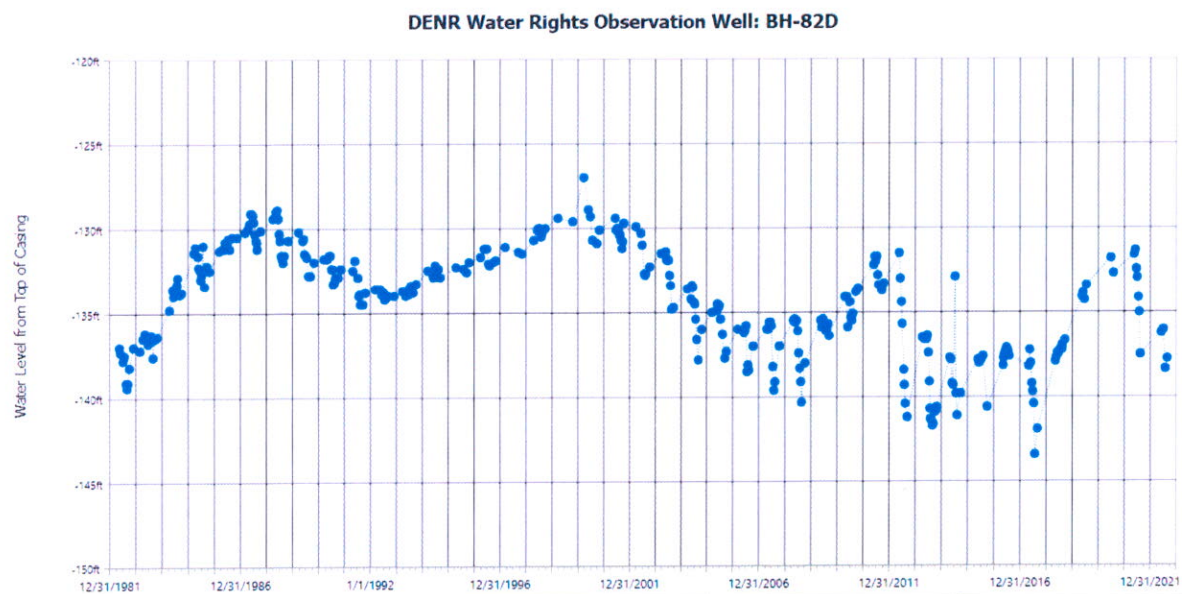


Figure 3. Hydrograph for observation well BH-82D (Water Rights, 2022b)

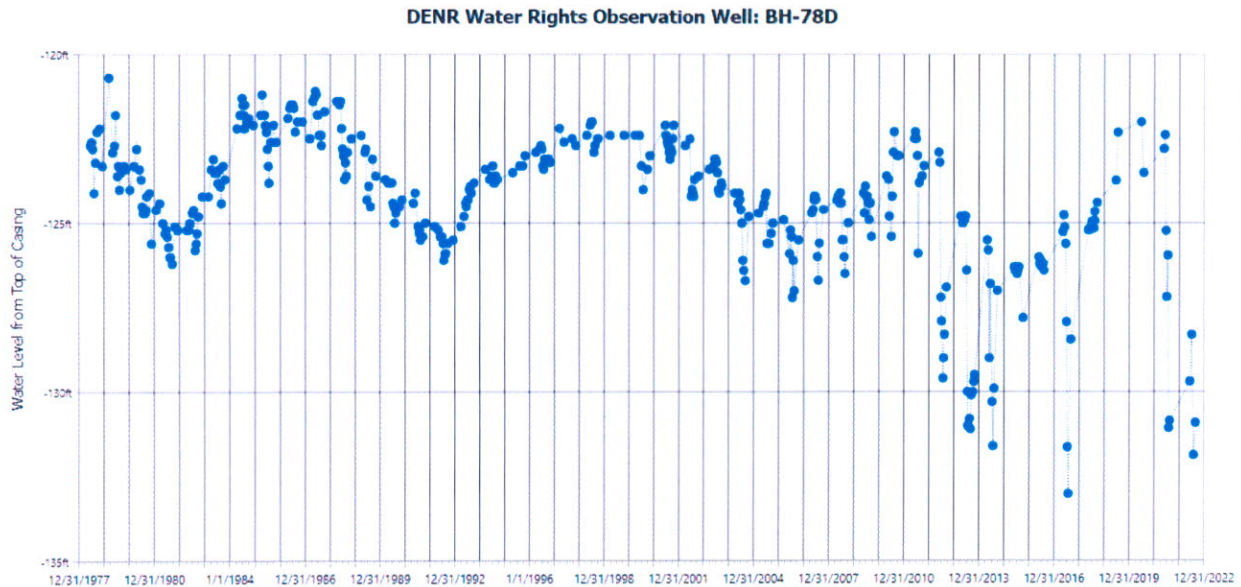


Figure 4. Hydrograph for observation well BH-78D (Water Rights, 2022b)

The hydrographs for the Choteau: West aquifer indicate that the aquifer responds well to climatic conditions because water levels are rising during wetter periods (early spring snowmelt and precipitation) 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 water levels 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 Choteau: West 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 53 water rights/permits, partially shown on Figure 5, authorized to appropriate water from the Choteau: West aquifer (Water Rights, 2022c). The closest water right/permit to the diversion point is Water Right No. 7636-3 which is held by Verlyn Jelsma. The diversion point for Water Right No. 7636-3 is located approximately 2.2 miles southeast of the diversion point for this application (Water Rights, 2022c).

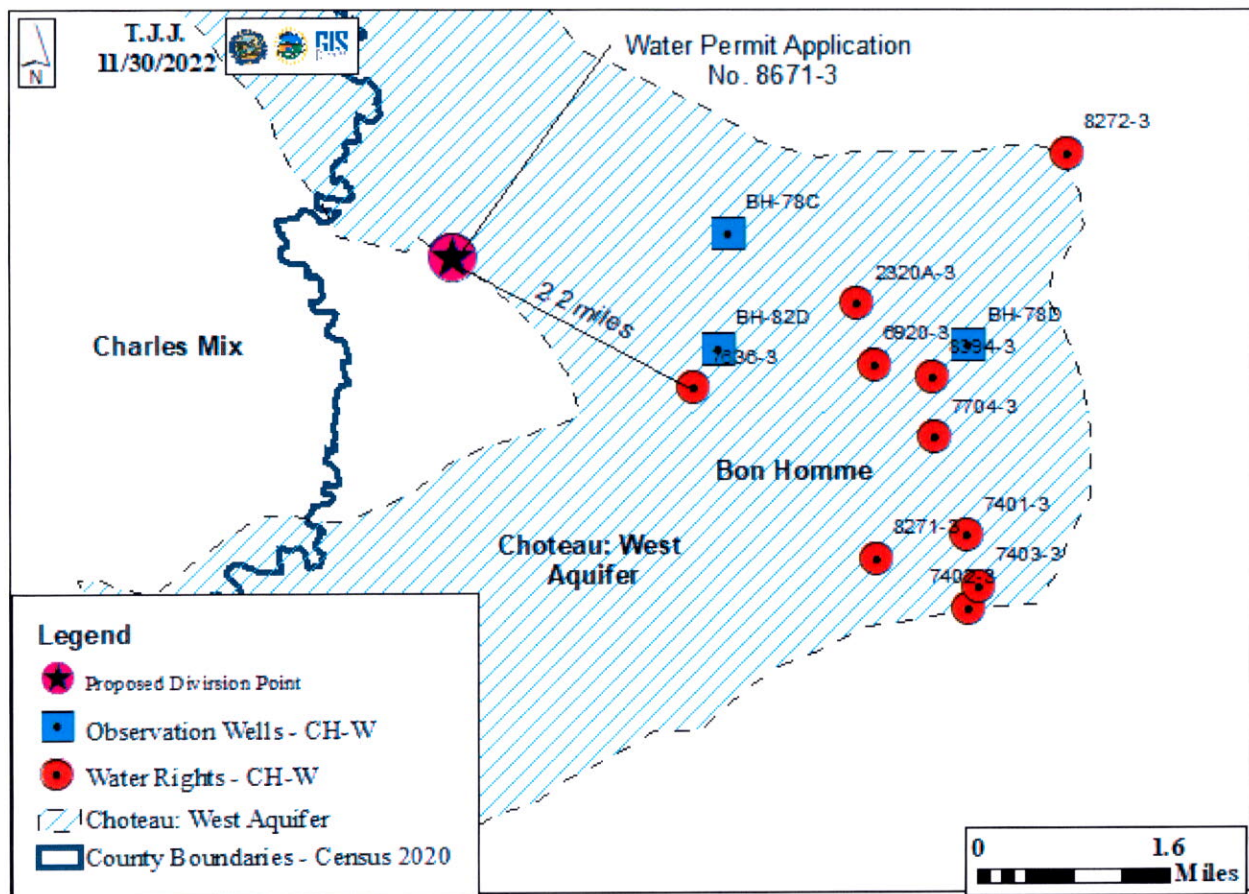


Figure 5. Map of the area Choteau: West aquifer water rights/permits and observation wells (Water Rights, 2022b and 2022c), and the location of diversion point for Water Permit Application No. 8671-3.

There are domestic wells on file with the DANR-Water Rights Program that are completed into the Choteau: West aquifer, with the closest domestic well on file (not held by the applicant) approximately 0.6 miles northeast of the diversion point (Water Rights, 2022d). There could potentially be other domestic wells completed into the Choteau: West aquifer near the diversion point that are not on file with the DANR-Water Rights Program.

The Choteau: West aquifer is primarily under confined conditions. In a confined aquifer, drawdown from a pumping well can extend some distance from the well. 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 Choteau: West 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 saturated aquifer thickness near the diversion point, any drawdown created from the diversion is not expected to cause an unlawful impairment on existing water right/permit holders or domestic users with adequate wells. There have also been some historical concerns with irrigation in the area causing the water level in the aquifer being low enough to cause issues with pumping, but these concerns have since been resolved and now addressed in SDCL 46-6-6.1 (Water Rights, 2022e). Therefore, there is a reasonable probability that any interference from the proposed appropriation will not impose unlawful impairments on existing users with adequate wells.

HISTORICAL CONCERNS:

There was concern in the 1950’s about impacts of irrigation development on artesian head pressure. Walker (1961) concluded that irrigation pumping had lowered the water level enough to cause some domestic wells in the area to stop flowing. The concerns have been dealt with and no further issues with groundwater pumping occurred in the next several years. Another complaint was filed in 1989 regarding a well no longer able to pump water likely due to the lower water level caused by the large amount of pumping withdrawals in the area. This issue was resolved by lowering the pump inlet in the affected well (Water Rights, 2022e). Concerns over the impact of irrigation development on artesian head pressure, are now addressed in SDCL 46-6-6.1 in which artesian head pressure is not necessarily protected as a means of groundwater delivery.

CONCLUSIONS:

1. Water Permit Application No. 8671-3 proposes to appropriate 1.56 cfs of water for irrigation of 113 acres from one proposed well completed into the Choteau: West aquifer. The site of interest is located approximately 7 miles southwest of Avon, SD.
2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the Choteau: West aquifer to supply the proposed appropriation.

3. There is a reasonable probability that the diversion by Water Permit Application No. 8671-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic uses.



Tyler Jensen
Natural Resources Engineer I
SD DANR - Water Rights Program



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

References

- Christensen, C.M., 1970. Major Ground-Water Aquifers in Bon Homme County, South Dakota. Water Information Circular 4. SD DENR-Geological Survey, Vermillion, SD.
- Drinking Water. SD DANR Drinking Water Program “My System Information”. Accessed: December 19, 2022. < <https://danr.sd.gov/OfficeOfWater/DrinkingWater/default.aspx> >
- Hedges, L.S., Allen, J., Holly, D.E., 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge; United States Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bed rock Topography and Distribution, Task 2: Extent of Aquifers, Task 3 Ground-Water Storage, Task 4: Computerized Data Base. United States Army Corps of Engineers Contract DACW 45-80-C-0185.
- Jorgensen, D.G., 1971. Geology and Water Resources of Bon Homme County, South Dakota Part II: Water Resources. Bulletin 21. SD DENR-Geological Survey, Vermillion, SD.
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- SDGS, 2022. South Dakota Geological Survey Lithologic Logs Database. Accessed November 29, 2022. <http://cf.sddanr.net/lithdb/>.
- Walker, I. R. 1961. Shallow Ground Water Resources in the Wagner Area, Charles Mix and Douglas Counties, South Dakota. South Dakota Geologic Survey Report of Investigations 90. Vermillion, SD.

Water Rights, 1995. Findings of Fact, Conclusions of Law, and Final Decision in the Matter of Water Permit Application No. 2313-2, Coca-Cola Bottling Company of the Black Hills. DANR-Water Rights Program file for Water Right No. 2313-2. Pierre, SD.

Water Rights, 2022a. "1979-2021 Irrigation Summaries by Aquifer", SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights, 2022b. Observation Well Data, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2022c. Water Right/Permit Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2022d. Well Completion Reports, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2022e. County Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, December 29, 2022 10:00 AM
To: dnagel256@gmail.com
Subject: Water Permit Application No 8671-3
Attachments: 4557.pdf

Attached is a copy of the report, chief engineer 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 being mailed to you today.

Karen Schlaak

DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>



AFFIDAVIT OF PUBLICATION

RECEIVED

JAN 11 2023

OFFICE OF
WATER

YANKTON DAILY PRESS AND DAKOTAN

JIM & DARLENE NAGEL
40381 309TH ST
AVON SD 57315

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

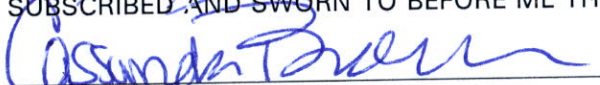
KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
NOTICE OF APPLICATION NO.

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 4th DAY OF January, 2023
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$39.68 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND 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.

PUBLISHED ON: 01/04/2023

FILED ON: 01/05/2023


SUBSCRIBED AND SWORN TO BEFORE ME THIS 5th DAY OF January, 2023


NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 07/04/2026

Ad text : NOTICE OF APPLICATION
NO. 8671-3 to Appropriate Water

Notice is given that Jim and Darlene Nagel Joint Revocable Trust, c/o Jim Nagel, 40381 309th St, Avon SD 57315 has filed an application for a water permit to appropriate 1.56 cubic feet of water per second from one well to be completed into the Choteau:West Aquifer (186.5 feet deep) located in the center of NE 1/4 Section 6 for irrigation of 113 acres located in the NE 1/4 Section 6; all in T93N-R61W. This site is located approximately 7 miles southwest of Avon SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8671-3 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 Engineers 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 January 16, 2023.

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 January 16, 2023.

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 \$39.68 and can be viewed free of charge at www.sdpublicnotices.com.

Published January 4, 2023.

RECEIVED

JAN 11 2023

OFFICE OF
WATER

Affidavit of Publication

RECEIVED

JAN 09 2023

OFFICE OF
WATER

State of South Dakota }
County of Bon Homme } SS

Rebecca Ty... Being first duly sworn says that the **Tyndall Tribune & Register** is a legal weekly newspaper for publication of legal and other official notices as required by Chapter 298 of the Session Laws of South Dakota, 1939; that it has bona fide paid circulation of more than two hundred copies weekly; that it is published in English language in the City of Tyndall, Bon Homme County, South Dakota, and has been admitted to the United States mail under second class mailing privilege for more than one year prior to the first publication of the notice herein mentioned, and that it is printed in an office maintained at the place of publication at Tyndall, South Dakota, and that deponent is the publisher in charge of the advertising department of said newspaper; that the advertisement headed

Nagel *Not. of Appl. 8671-3*
+ to Approp. Water
107 @ 399
a printed copy of which is hereto attached, was printed and published in said newspaper for *one* successive weeks, upon the following dates:

<i>Jan 4</i> 20 <i>23</i>	20.....
.....20.....	20.....
.....20.....	20.....
.....20.....	20.....

That the full amount of the fee charged for the publication of said notice, *\$42.69*, inures to the benefit of the publisher of said newspaper, that no agreement or understanding for the division thereof has been made with any other person, and that no part has been agreed to be paid to any person whomsoever.

Rebecca Ty...
Subscribed and sworn to before me this

4 day of *January* 20*23*

Peggy Sch...
Notary Public, South Dakota

My commission expires 10-24-2021

NOTICE OF APPLICATION NO. 8671-3 to Appropriate Water

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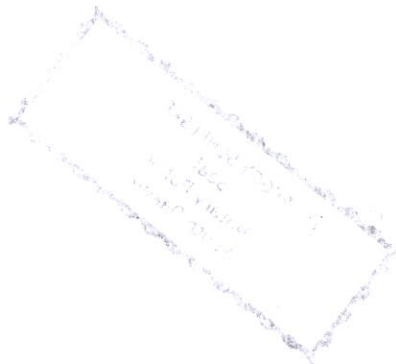
Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at

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 January 16, 2023.

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 \$42.69 and can be viewed free of charge at www.sdpublicnotices.com

(Jan. 4)



Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, December 29, 2022 9:49 AM
To: tyndalltribune@gmail.com
Subject: 8671-3, Jim & Darlene Nagel
Attachments: 8671-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on January 4, 2023.

Jim & Darlene Nagel, 40381 309th St, Avon SD 57315, (605 661-6371) have 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

DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>



Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, December 29, 2022 9:50 AM
To: Cassandra Brockmoller (cassandra@yankton.net)
Subject: 8671-3, Jim & Darlene Nagel
Attachments: 8671-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on January 4, 2023.

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Karen Schlaak

DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>





**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.**

December 29, 2022

Jim & Darlene Nagel Joint Revocable Trust
c/o Jim Nagel
40381 309th St
Avon SD 57315

Dear Mr. Nagel:

Water Permit Application No. 8671-3 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 Tyndall Tribune & Register printed at Tyndall (Ph # 605 589-3242) and the Press & Dakotan printed at Yankton (Ph # 605 665-7811). 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,

Karen Schlaak

Karen Schlaak
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. 8671-3 to Appropriate Water

Notice is given that Jim and Darlene Nagel Joint Revocable Trust, c/o Jim Nagel, 40381 309th St, Avon SD 57315 has filed an application for a water permit to appropriate 1.56 cubic feet of water per second from one well to be completed into the Choteau:West Aquifer (186.5 feet deep) located in the center of NE 1/4 Section 6 for irrigation of 113 acres located in the NE 1/4 Section 6; all in T93N-R61W. This site is located approximately 7 miles southwest of Avon SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8671-3 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 January 16, 2023.

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Published once at the total approximate cost of_



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

FEB 17 2023

Jim & Darlene Nagel Joint Revocable Trust
c/o Jim Nagel
40381 309th St
Avon SD 57315

Dear Mr. & Mrs. Nagel:

Enclosed is Water Permit No. 8671-3 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
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.: 8671-3

Name of Applicant: Jim and Darlene Nagel Joint Revocable Trust

Date of Posting: 1/4/2023

Date of Removal: 2/17/2023



Ron Duvall, Water Rights Permitting Administrator

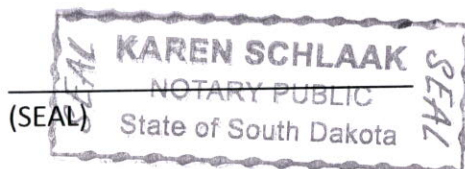
2/17/23

Date

Subscribed and sworn to before me, a notary public, this 17th day of February, 2023.



Notary Public - South Dakota
My commission expires: 4/1/2025



8671-3

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

Date 6-30-2023

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

FROM: Jim and Darlene Nagel Revocable Trust
(name)

40381 309th St,
(address)

Avon, SD 57815
(city, state, zip)

605-286-3771
(phone)

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

Water Permit No. 8671-3 states that the water use system is to be constructed by

January 16, 2023, and water is to be put to beneficial use by January 11, 2032.
(date) (date)

The water use system was completed on April, 2023.
(date)

Applying the water to beneficial use was completed on May, 2023.
(date)

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

Jim Nagel
(signature)



8671-3

**Report of Examination of Works and/or Application of Water to Beneficial Use
For Permit No. 8671-3**

I have this day, June 30, 2023 made a thorough examination of the water use system owned by Jim and Darlene Nagel Joint Revocable Trust, c/o Jim Nagle, 40381 309th St, Avon, SD 57315 holder of Permit No. 8671-3, bearing the priority date of October 28, 2022, authorizing the diversion of 1.56 cu. ft. per second of the waters of groundwater, Choteau: West Aquifer for the irrigation of 113 acres, located in Bon Homme County.

Inspection contact: Jim Nagel

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Christensen Well & Irrigation
- 2) No. of Wells: 1
- 3) Depth(s): 190 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 16 inches
- 2) Length: 106.5 feet
- 3) Type: Plastic

Screen:

- 1) Diameter: 16 inches
- 2) Length: 80 feet
- 3) Type: PVC
- 4) Static water level: 99 feet

Pump:

- 1) Make: Layne & Bowler
- 2) Model: 12KLO-LB
- 3) Capacity: 700 gpm

Motor:

- 1) Make: US Motors
- 2) Model No.: HF70
- 3) Horsepower rating: 60 hp

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

- 1) Type: Aluminum Size: 8 inches Length: 10 feet

C. Works used to apply water to beneficial use:**Center Pivot:**

- 1) Make: T&L
- 2) Overall length: 1,171 feet
- 3) Number of towers: 7
- 4) End gun: Yes
- 5) Capacity: 700 gpm

Chemigation Equipment:

- 1) Does chemigate: No

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by: Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period: NA, the pivot was put into use in 2023.
- 3) Exceptions to compliance are: None

E. Condition and Location:

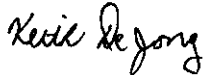
- 1) The system is in good condition with the point(s) of diversion located as follows:
The well is 1,280 feet west and 1,270 feet south of the northeast corner of Section 6-T93N-R61W (Latitude 42.90539, Longitude -98.09413 – NE1/4 of the NE1/4).
- 2) The works are capable of diverting and conveying to the place of use 1.56 cu. ft. per second of water which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows:

All in: Section 6-T93N-R61W

<u>NW1/4NE1/4</u>	<u>28 acres</u>
<u>NE1/4NE1/4</u>	<u>28 acres</u>
<u>SW1/4NE1/4</u>	<u>28 acres</u>
<u>SE1/4NE1/4</u>	<u>28 acres</u>

comprising a total of 112 acres of land and the license should be issued for 1.56 cfs.

- 3) All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project: This permit indicates that the well should be in the Choteau: West Aquifer. There is a new well approximately one third of a mile northeast of this well. That new well is permitted for the Niobrara Aquifer. The static water elevations are similar as well as the formation elevations.

Keith DeJong, PE Ret.
Water Rights Inspector
DANR, Water Rights Program

Date report completed: July 7, 2023



Keith DeJong
Water Rights Inspector
January 25, 2023



DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

JUL 14 2023

Jim & Darlene Nagel Joint Revocable Trust
c/o Jim Nagel
40381 309th St
Avon SD 57315

8671-3

Dear Mr. Nagel:

Enclosed is Water License No. 8671-3. 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.

For your information SDCL 46-6-27 requires that if in the future, the owner of an existing well, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

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. If you have any questions, please contact our office.

Sincerely,

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

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8671-3**

(1) Jim & Darlene Nagel Joint Revocable Trust, c/o Jim Nagel; 40381 309th St, Avon SD 57315, made Application No. 8671-3, October 28, 2022, for a water permit to divert 1.56 cubic feet of water per second from groundwater, one well (Choteau: West Aquifer), Bon Homme County, South Dakota for irrigation purposes. Permit No. 8671-3, with a priority date of October 28, 2022, was approved January 16, 2023, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before January 16, 2028, and for the application to beneficial use of water on or before January 16, 2032.

(2) It is certified that the permit holders have 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 1.56 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,280 ft W and 1,270 ft S of the NE corner of Section 6, T93N, R61W (NE ¼ NE ¼)
(Latitude 42.90539 Longitude -98.09413)

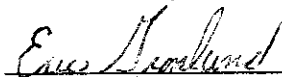
(3) The permit holders have complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate the following land:

Section 6, T93N, R61W	
NW ¼ NE ¼	28.0 acres
NE ¼ NE ¼	28.0 acres
SW ¼ NE ¼	28.0 acres
SE ¼ NE ¼	28.0 acres
TOTAL: 112.0 acres	

(4) Pursuant to South Dakota Water Law 46-5-30.1 Jim & Darlene Nagel Joint Revocable Trust, the holders and/or owners of Water Right No. 8671-3 is issued a license to appropriate water, the right to use 1.56 cubic feet of water per second from groundwater, one well (Choteau: West Aquifer), with a priority date of October 28, 2022, from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8671-3 and subject to the following qualifications:

1. The well 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 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. This Water Right is approved subject to the irrigation water use questionnaire being submitted each year.



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

JUL 14 2023

date





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

October 29, 2024

8671-3

Jim & Darlene Nagel Joint Rev Trust
c/o Jim Nagel
1403 Saint Benedict Dr
Yankton SD 57078

Dear Mr. Nagel:

Enclosed is a "Notice" dated January 19, 2024, concerning the 2024 Irrigation Questionnaires.

The notice was originally mailed to 40381 309th St, Avon SD 57315. The post office notified our office that your address has changed, and your records have been updated accordingly.

This is a time sensitive matter. Please complete and return the enclosed questionnaire or submit your report online at <https://danr.sd.gov/iq/> using this password *RCJENK*.

If this change of address is in-correct, please contact our office immediately to update your contact information.

Sincerely,

Amanda Dewell
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

enclosures

553 WFE 114162410010/26/24
RETURN TO SENDER
NAGEL
1403 SAINT BENEDICT DR
YANKTON SD 57078-6863
RETURN TO SENDER
[Barcode]



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

October 21, 2025

8671-3

Jim Nagel
10626 Oak Bend Blvd
Indianapolis IN 46239

Dear Mr. Nagel:

Enclosed is a "Notice" dated October 8, 2025, concerning the 2025 Irrigation Questionnaire.

The notice was originally mailed to you at 1403 Saint Benedict Dr, Yankton SD 57078. The post office notified our office that your address has changed, and your records have been updated accordingly.

This is a time sensitive matter. Please complete and return the enclosed questionnaire or submit your report online at <https://danr.sd.gov/iq/> using this password HNLAAM.

If this change of address is in-correct, please contact our office immediately to update your contact information.

Sincerely,

Amanda Dewell
Permitting Administrator
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

553 NFE 114172518218/1A/25
RETURN TO SENDER
NAGEL
10626 OAK BEND BLVD
INDIANAPOLIS IN 46239-1782
RETURN TO SENDER



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

November 3, 2025

8671-3

Bo Coleman
40381 309th St
Avon SD 57315

Dear Mr. Coleman:

Each year, the State of South Dakota sends out Water Management Irrigation Questionnaires to collect information based on annual water use from our state's waters.

This year we received word from one of the irrigators that the property they had previously reported on had been sold to you. For your convenience I have enclosed a partially completed "Transfer of Ownership" form for you to complete and return in the pre-paid envelope.

Please return the form with a check for \$50.00 made payable to "SD Water Rights Program" to cover the transfer fee. If you would prefer to pay by card you may call our Fiscal Office at 605.773.5559. This form will still need to be returned even if you are submitting payment over the phone.

Should you decide you wish to discontinue the irrigation on this piece of land, we would ask that you let us know.

If you have any questions or concerns, please give me a call. My direct number is 605.773.8204

Sincerely,

Shannon Konst
Water Rights Program
605 773-3352
Shannon.konst@state.sd.us

enclosures

8671-3

PAID

NOV 14 2025

Ck# 3209

Rec't#

NOTICE OF TRANSFER OF OWNERSHIP

For assistance call (605) 773-3352

Mail to: SD DANR, Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182

Water Right/Permit No. 8671-3

Date: 11/8/25

I/We request that Water Right/Permit No. 8671-3 formerly owned by:
Darlene Nagel be transferred to:

New Owner Name: Boe Coleman
Address: 40381 309th St.
City, State, Zip Avon, SD 57315
mobile: 308-520-5534
email:

Title to the following described land(s)/property has been transferred as described above:

112 Acres - NE1/4 S6 T93N-R61W

☒ I understand that the validity of Water Right/Permit No. 8671-3 has not been determined by this transfer action. If I have any questions on validity, I understand that only the Water Management Board has the authority to determine if a water right/permit is valid (see note below).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Fifty Dollars (\$50.00) is included to cover the filing fee as required by SDCL 46-2-13.

I, Boe Coleman, the new owner, certify that the above information is true and correct.


(signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five-year construction period has expired. Once a water permit is developed, an inspection is conducted to issue a water right license for the project as developed. A water permit/right may be cancelled for one or more of the following reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three-year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date November 18th, 2025

RECEIVED OF Boe Coleman 40381 309th St Avon SD 57315

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	\$ _____
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____	\$ _____
Fee for Filing Transfer Form #8671-3	\$ <u>50.00</u>
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>50.00</u>

By Mark Mayer
Chief Engineer



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

November 21, 2025

8671-3

Boe Coleman
40381 309th St
Avon SD 57315

Dear Mr. Coleman:

The South Dakota Water Rights Program is in receipt of the "Notice of Transfer of Ownership" form and the required fees you submitted for Water Right No. 8671-3. Enclosed is a receipt of payment for your records.

Water Right No. 8671-3 previously held by the Jim & Darlene Nagel Revocable Trust, is now listed under yourself. I have also updated your contact information in our system.

As a reminder, so long as you use the water beneficially, as stated in the license (copy enclosed), State Water Laws provide that you have a continuing right to use the water. Should the water not be put to beneficial use for a period longer than 3 consecutive years, without legal excuse, the water right will be subject to cancellation.

If you have any questions, please contact me.

Sincerely,

Amanda Dewell
Permitting Administrator
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

NOTE: The validity of Water Right No. 8671-3 has not been determined by this transfer action. Only the Water Management Board has the authority to determine if a water permit/right is valid.

enclosures