

WATER PERMIT NO. 8910-3

Name of Applicant: Nels Sorensen

Address: 2903 Sorensen Avenue, Vermillion SD 57069

Phone: 605-624-4535

Amount of Water Claimed: No Add'l

Total Acres: 40

Source of Water Supply: Groundwater

Water to be used for: Irrigation

County: Clay

Type of Waste Disposal System:

Location: Approx. 5 miles northwest of Vermillion SD

PRIORITY

Date Received: 11-18-24

Application/License Fee: \$500.00

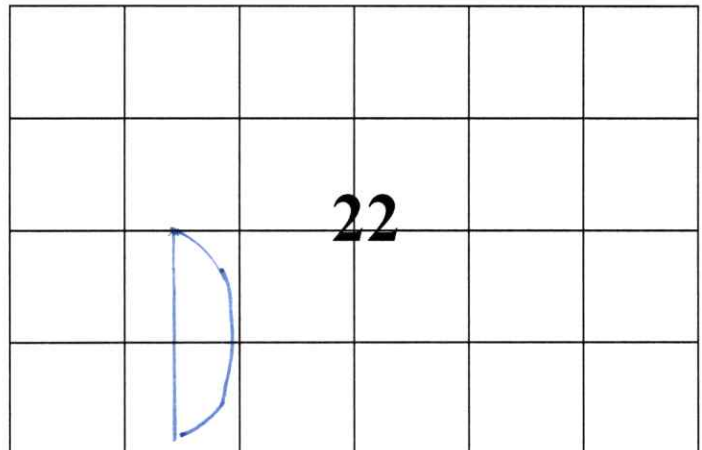
Corrected Application Received: 11-19-24

Period of Annual Use: April 1 – October 31

Remarks: Letter was sent regarding irrigation of 33 additional acres not covered under Water Right No. 6985-3

Diversion Point: Center between the W 1/2 SE 1/4 and the E 1/2 SW 1/4 Sec 22-T93N-R52W

Land to be Irrigated: W 1/2 SW 1/4 Sec 22-T93N-R52W



Depth of Well: 207

Well Driller: Hammond-Wetmore

Remarks:

Type of Map: aerial

Reviewed and the Number Assigned on: 11-20-24

By: Rachel Rodriguez

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 8910-3

Date of first receipt of application November 18, 2024.

Date of return to applicant for corrections, amendments or changes November 19, 2024.

Date of receipt of corrected application November 19, 2024.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8910-3 to Nels Sorensen, 2903 Sorensen Avenue, Vermillion SD 57069, 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. 8910-3 authorizes irrigation of an additional 43 acres, with no increase to the rate of diversion. Water Right No. 6985-3 authorizes 1.6 cubic feet of water per second (cfs) from one well completed into the Lower Vermillion Missouri Aquifer (184 feet deep) located in the SE 1/4 SW 1/4 Section 22 for irrigation of 112 acres located in the W 1/2 SE 1/4, E 1/2 SW 1/4 Section 22; all in T93N-R52W. This permit allows irrigation of an additional 43 acres located in the SW 1/4 Section 22-T93N-R52W from the existing well authorized by Water Right No. 6985-3. This permit and Water Right No. 6985-3 authorize a combined total of 1.6 cfs to irrigate a combined total of 155 acres. This site is located approximately five miles northwest of Vermillion 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 – October 31.
3. The date from which applicant may claim right is November 18, 2024.
4. The date of approval of Permit No. 8910-3 is February 3, 2025.
5. One-fifth of the construction is to be completed on or before August 3, 2027.
6. All construction is to be completed on or before February 3, 2030.
7. Water is to be put to beneficial use on or before February 3, 2034.
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 this Permit and Water Right No. 6985-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals must 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 26 2025
date



PAID

NOV 18 2024

Ck# 3741

Rec't#

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8910-3</u> Hydrologic Unit <u>10170102</u> Basin <u>Vermillion R</u> Newspaper <u>Plain Talk</u> <u>Daily Press & Dakotan</u> (office use only)
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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 Nels Sorensen

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

Mailing Address 2903 Sorensen Av Vermillion SD 57069
(Address) (City) (State) (Zip Code)
Phone 605-624-4535 Mobile 605-670-2384 Email _____

2. Amount of water claimed 1.6 *CFS or 720 **GPM 145 ***AF Total Acreage 43
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Ground well into Lower Jones Missouri Aquifer

4. Location of point of diversion 1 well in E 1/2 SW 1/4 + W 1/2 SE 1/4 Sec 22 T93N R52W
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

County Clay

5. County or counties where water will be used Clay

6. Annual period during which water is to be used April thru Oct 31

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
<u>E 1/2 SW 1/4 + W 1/2 SE 1/4 Sec 22 T93N R52W</u>	<u>112</u>	<u>E 1/2 SW 1/4 Sec 22 T93N R52W</u>	<u>33</u>

8. Give a description of the project. (Attach sheet if more space is needed)
1 well will service 2 different center pivots

I, Grant Sorensen (605-670-7574) President of Sorensen Family Farm LLC, 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)

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WATER

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 Heine Irrigation
Vermillion SD

For either existing or proposed wells:

- c) Well Depth (required) approx 180' Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____
- d) Distance to nearest domestic well on applicant's property _____ Property owned by others _____

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)

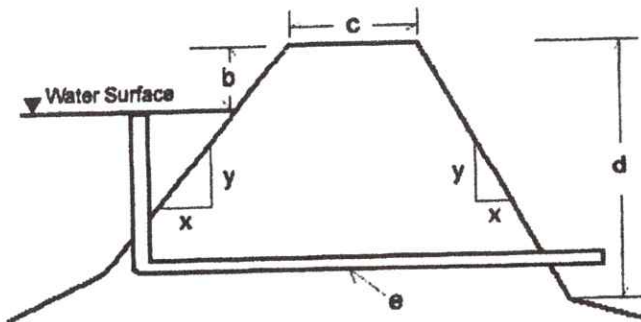
Upstream _____

Downstream _____

h) Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



Measure Area

Planar

Acres

Result

Area

Area (ac)	Sum (ac)
40.47	40.47

Distance

Segment (m)	Perimeter (m)	Sum (m)
812.31		
108.39		
67.92		
63.89		
80.86		
58.78		
68.95		
88.19		
63.51		
67.63		
77.78		
57.57		
40.54		
58.99		
18.41		
60.12		
94.75		
96.40		
66.17	2,051.17	2,051.17

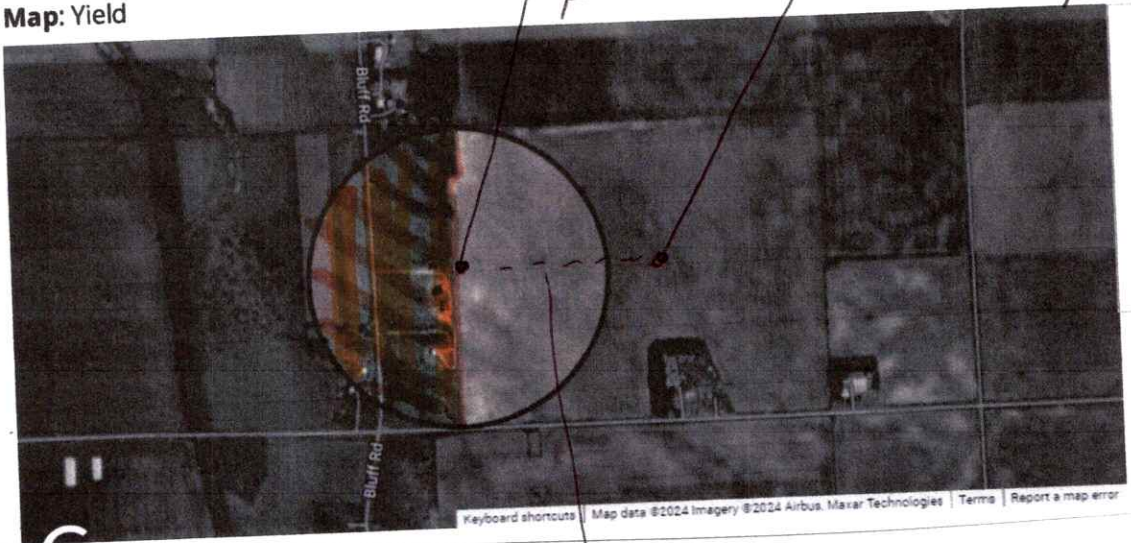


Approx 33 acres

new pivot point

existing well & pivot point

Map: Yield



pipeline

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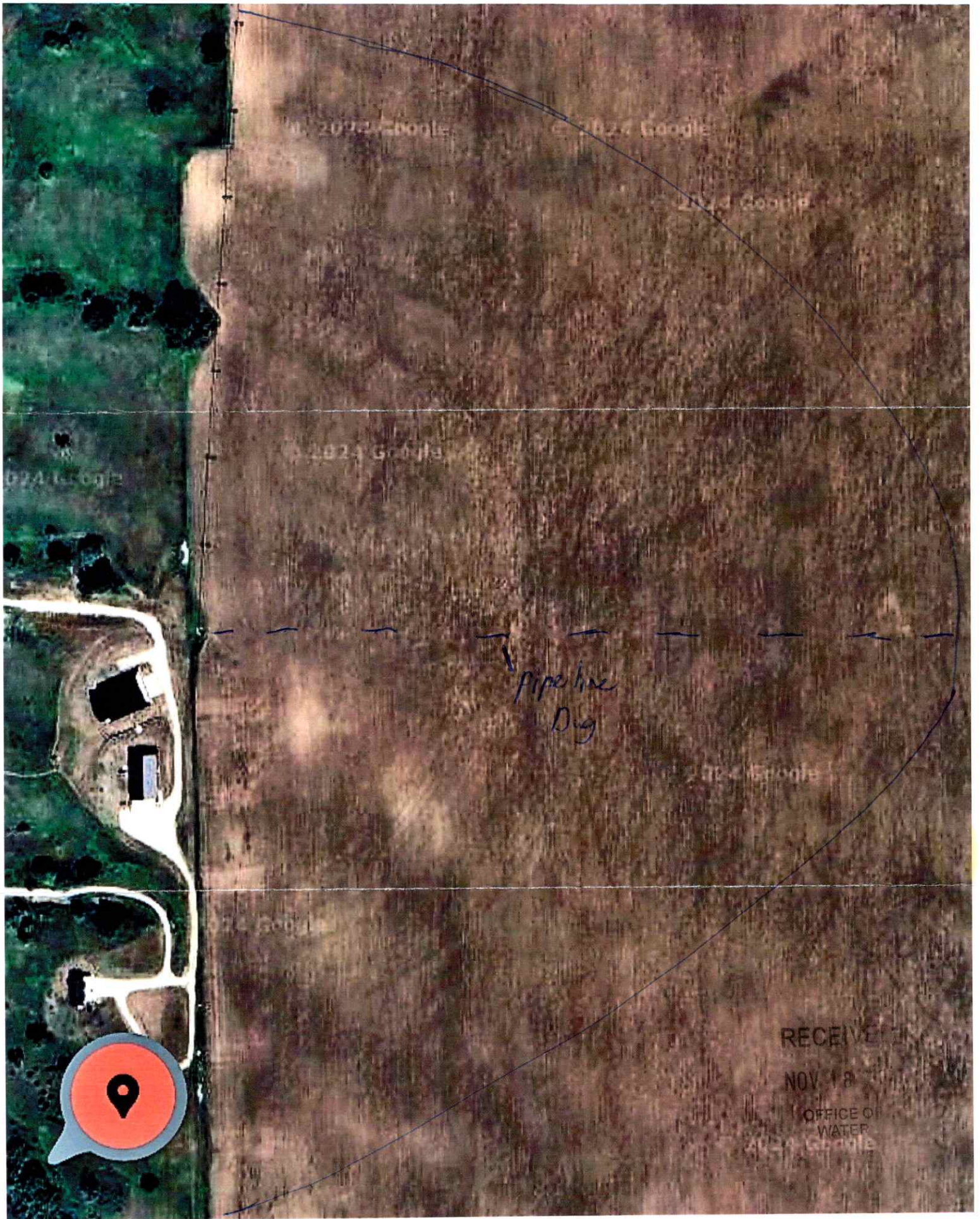
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RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date November 19TH, 2024

RECEIVED OF Sorensen Family Farms C/O Nels Sorensen 2903 Sorensen Avenue Vermillion SD 57069

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

Fee for Application for Permit No. <u>8910-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>500.00</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>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>700.00</u>

By

Eric Gronlund

Chief Engineer

SN

Water Rights Program - DANR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permit Application No. 8910-3, Nels Sorensen

ADDRESS: 2903 Sorensen Avenue, Vermillion SD 57069 COUNTY: Clay County

DATE: December 16, 2024 TELEPHONE: 605 670-2384

RE: Water Source

Grant Sorensen called back on behalf of his father, Nels Sorensen.

I indicated the application listed the Lower James Missouri aquifer as the water source. Water Rights believes the source at this location will be the Lower Vermillion Missouri aquifer.

Grant Sorensen requested the application be amended to reflect the Lower Vermillion Missouri aquifer as the water source.

NAME: 
Eric Gronlund

Water Rights Program - File Documentation

NAME: Grant Sorensen for Nels Sorensen

ADDRESS: 2903 Sorensen Avenue, Vermillion SD 57069

DATE: November 19, 2024

RE: New Water Permit Application

COMMENTS:

Called Grant today regarding his application for total acres of irrigation. He listed the already authorized 112 acres cover by Water Right No. 6985-3, as well as 33 acres not covered for a total of 145. I called to clarify that he was in fact only requesting the additional 33 acres, since the 112 are already authorized. He agreed and said he was a bit confused about the licensing and stated that he thought he needed to include the 112 acres. I also, suggested that he round up to 40 acres, since I mapped the proposed area and came up with 39 acres. He agreed to 40 acres.

Rachel Rodriguez

Rachel Rodriguez

Water Rights Program

605 773-3352

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. 8910-3, Nels Sorensen**

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. 8910-3, Nels Sorensen, 2903 Sorensen Avenue, Vermillion SD 57069.

The Chief Engineer is recommending APPROVAL of Application No. 8910-3 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 this Permit and Water Right No. 6985-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals must 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
January 14, 2024

Report to the Chief Engineer
On Water Permit Application No. 8910-3

Nels Sorensen

January 13th, 2025

Water Permit Application No. 8910-3 proposes to irrigate an additional 43 acres with no increase in diversion rate to what is authorized for irrigation by Water Right No. 6985-3. Water Right No. 6985-3 authorizes a maximum instantaneous diversion rate of 1.6 cubic feet of water per second (cfs) from one well completed into the Lower Vermillion Missouri aquifer (184 feet deep) located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 22 for the irrigation of 112 acres located in the W $\frac{1}{2}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ Section 22; all in T93N-R52W. This application proposes to irrigate an additional 43 acres located in the SW $\frac{1}{4}$ Section 22-T93N-R52W from the existing well authorized by No. 6985-3. This application, if approved, and Water Right No. 6985-3 will authorize a combined total of 1.6 cfs to irrigate a combined total of 155 acres. The site of interest is located approximately 5 miles northwest of Vermillion, SD in Clay County.

AQUIFER: Lower Vermillion Missouri (LVM)

HYDROGEOLOGY:

The Lower Vermillion Missouri aquifer, referred to as the LVM aquifer for the remainder of this report, is a buried glacial outwash that was deposited by meltwater streams beyond the margin of active glacial ice (Stephens, 1967). The LVM aquifer materials range in size from a coarse sand to a coarse gravel (Niehus, 1994). The LVM aquifer is primarily confined but can be locally found under unconfined conditions such as in the flood plain of the Vermillion River (Niehus, 1994; Stephens, 1967). The LVM aquifer has an average thickness of approximately 99 feet in Union County (Niehus, 1994). Table 1 shows information related to the areal extent of the LVM aquifer, the area utilized for this report is approximately 106,119 acres (Mathiowetz, 2018).

The LVM aquifer is hydrologically connected to the Upper Vermillion Missouri: South (UVM:S) aquifer to the north, the Missouri: Elk Point aquifer to the south, the underlying Dakota aquifer, and the Vermillion River (Buhler, 2014; Mathiowetz, 2018; Niehus, 1994; Stephens, 1967). Hedges and others (1982) delineated a boundary between the Upper Vermillion Missouri aquifer and LVM aquifer with portions of each boundary being modified by Buhler (2014) and Mathiowetz (2018) in response to additional study of the Upper Vermillion Missouri aquifer, as shown on Figure 1.

Table 1. Estimated areal extent for the historic LVM aquifer boundary (Hedges and others, 1982), the portion of the UVM:S aquifer that overlies the historic LVM aquifer boundary (Buhler, 2014). The current LVM aquifer boundary (Mathiowetz, 2018), and the unconfined portion of the LVM aquifer along the Vermillion River (modified from Jensen, 2000; modified from Stonesifer, 2013).

Delineation	Estimated Areal Extent (acres)
Historic Lower Vermillion Missouri Aquifer (modified from Hedges and others, 1982)	124,000
Upper Vermillion Missouri: South Aquifer (UVM:S) (modified from Buhler, 2014) - Portion that overlies LVM aquifer boundary estimated by Hedges and others, 1982.	18,000
Current Lower Vermillion Missouri Aquifer* (Mathiowetz, 2018)	106,119
Unconfined Portion of Lower Vermillion Missouri Aquifer - enclosed in UVM:S (Buhler, 2014) (modified from Jensen, 2000; modified from Stonesifer, 2013)	11,000
Unconfined Portion of Lower Vermillion Missouri Aquifer - not enclosed in UVM:S (Buhler, 2014) (modified from Jensen, 2000; modified from Stonesifer, 2013)	12,000
*Estimated by subtracting UVM:S aquifer boundary (Buhler, 2014) from historic boundary (Hedges and others, 1982)	

A water well completion report was not submitted with the application. Since this application proposes to use the same existing well for Water Right No. 6985-3, the water well completion report on file for the well authorized by Water Right No. 6985-3 will be used for this application as well. The well authorized by Water Right No. 6985-3 was completed into the LVM aquifer on December 17th, 2007 (Water Rights, 2025b). The reported depth to the top of aquifer material is 110 feet below the ground surface, the static water level is approximately 105 feet below the ground surface, and saturated aquifer thickness of approximately 80 feet (SDGS, 2025; Water Rights, 2025b). Based on this and other nearby water well completion reports, the LVM aquifer is confined at the diversion point (SDGS, 2025; Water Rights, 2025b and 2025d).

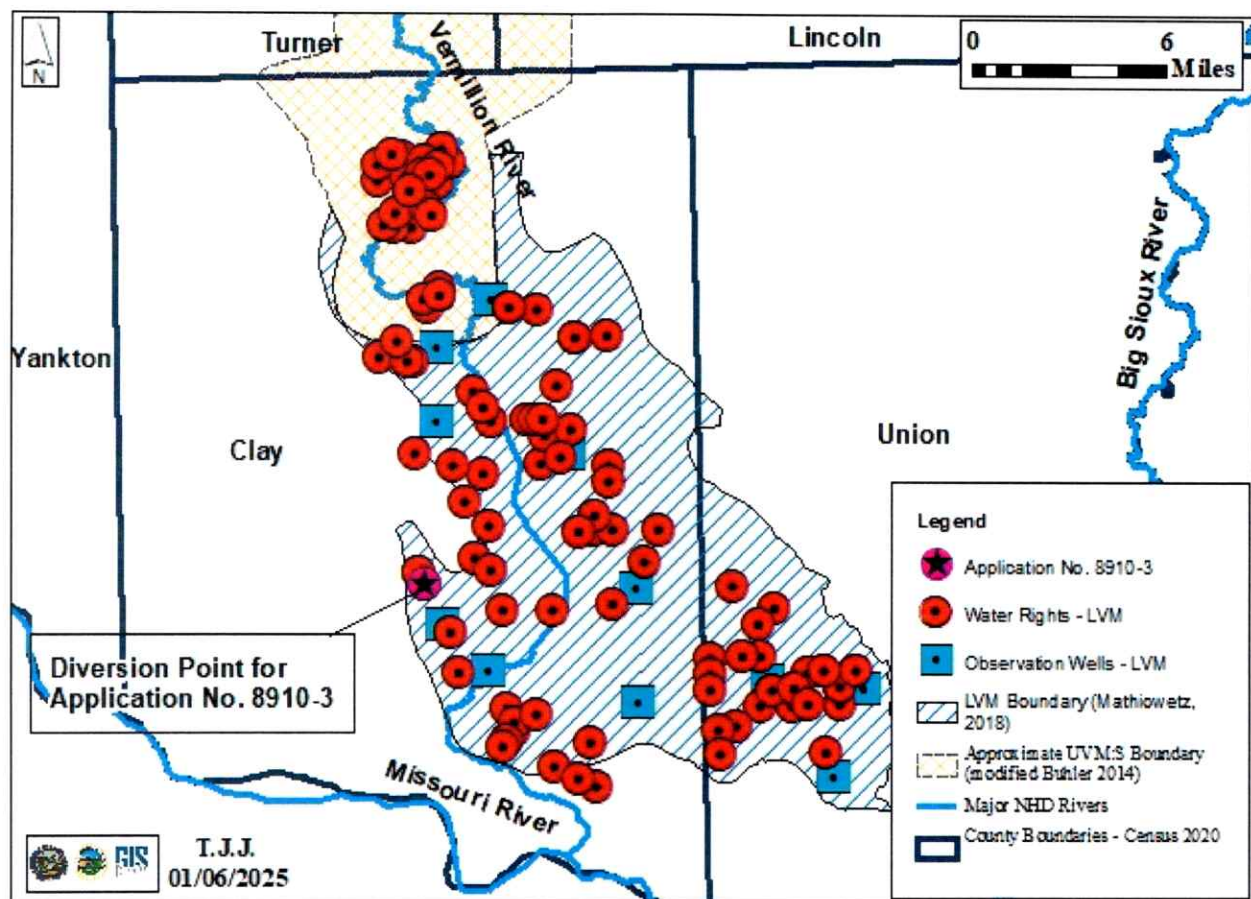


Figure 1. Map of the approximate LVM aquifer boundary delineated by Mathiowetz (2018), approximate UVM:S aquifer boundary estimated by Buhler (2014), the location of existing diversion point for Water Permit Application No. 8910-3, LVM aquifer observation wells, and LVM aquifer water rights (Water Rights, 2025b and 2025c).

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 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 uses and water rights within the LVM aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8910-3 proposes to appropriate water from the LVM aquifer for irrigation use. 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 LVM 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 LVM aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the LVM aquifer is received primarily through infiltration of precipitation where the aquifer is at or near land surface, groundwater inflow from the Upper Vermillion Missouri: South aquifer, seepage from Vermillion River, and leakage from the underlying Dakota aquifer (Niehus, 1994; Stephens, 1967). Using observation well analysis, Hedges and others (1985) estimated a recharge rate of 3.8 inches per year for the unconfined portion of the LVM aquifer. Stonesifer (2013) recalculated the recharge rate to be an estimated 4.58 inches per year using the same method but with additional observation well data. The historic unconfined area for this primarily confined aquifer is approximately 23,000 acres (Table 1; modified from Jensen, 2000; modified from Stonesifer, 2013). Therefore, the estimated average annual recharge rate for the historic unconfined portion of the LVM aquifer is approximately 8,778 acre-feet/year (based on Stonesifer, 2013 and modified from Jensen, 2000).

It is assumed that the confined portion of the LVM aquifer is hydrologically similar to the confined portion of the Upper Vermillion Missouri aquifer and recharges at a similar rate. However, further study conducted on the Upper Vermillion Missouri aquifer concluded the Hedges and others (1985) recharge rate estimate to the confined portion of the Upper Vermillion Missouri aquifer is likely underestimated (Holmes & Filipovic, 2015; Buhler, 2014)). Using regional flow-net analysis, Hedges and others (1985) estimated the recharge rate of the, primarily confined, Upper Vermillion Missouri aquifer to be approximately 0.25 inches per year. The confined portion of the historic LVM aquifer is approximately 101,000 acres, this was found by subtracting both unconfined portions from the historic total area on Table 1. Using the Hedges and others (1985) confined recharge rate multiplied by the confined portion areal extent, the average annual recharge rate for the confined portion of the historic LVM aquifer is approximately 2,104 acre-feet per year; keeping in mind that this estimate is likely lower than the actual rate based on Holmes & Filipovic (2015) investigation and Buhler’s (2014) report. Combining average annual recharge rate for both the confined and unconfined portions of the historic LVM aquifer (within the LVM aquifer within Hedges and others (1982) historical

aquifer boundary minus Buhler (2014) delineation of the UVM:S aquifer boundary), the average annual recharge rate is approximately 10,882 acre-feet per year.

The unconfined area not enclosed in UVM:S for this primarily confined aquifer is approximately 12,000 acres (Table 1; modified from Jensen, 2000; modified from Stonesifer, 2013). Therefore, the estimated average annual recharge rate for the unconfined portion not enclosed in the UVM:S of the LVM aquifer is approximately 4,580 acre-feet/year (based on Stonesifer, 2013 and modified from Jensen, 2000).

The confined portion of the LVM aquifer not within the boundaries of the UVM:S (Holmes and Filipovic, 2015; Buhler, 2014) is approximately 94,000 acres, this was found by subtracting the unconfined area from the current total area on Table 1. Using the Hedges and others (1985) confined recharge rate multiplied by the confined portion areal extent, the average annual recharge rate for the confined portion of the LVM aquifer is approximately 1,960 acre-feet per year; keeping in mind that this estimate is likely lower than the actual rate based on Holmes & Filipovic (2015) investigation and Buhler's (2014) report. Combining the average annual recharge rate for both the confined and unconfined portions of the LVM aquifer (within the LVM aquifer within Hedges and others (1982) historical aquifer boundary minus Buhler (2014) delineation of the UVM:S aquifer boundary), the average annual recharge rate is approximately 6,540 acre-feet per year.

Discharge

Discharge from the LVM aquifer primarily occurs through well withdrawals, seepage to surface water features, and evapotranspiration in areas where the aquifer is at or near land surface (Niehus, 1994; Water Rights, 2025d). There are 98 water rights/permits authorized to appropriate water from the LVM aquifer within the boundary delineated by Hedges and others (1982) (Water Rights, 2025c). It should be noted, in 2024, that several Lower and Upper Vermillion Missouri water rights were updated to show the proper aquifer designation. There are no future use permits reserving water from the LVM aquifer (Water Rights, 2025c).

Table 2 summarizes 8 non-irrigation water rights/permits authorized to appropriate water from the LVM aquifer with the estimated annual use for each water right/permit as determined by their limiting diversion rate or annual volume. The data on Table 2 is broken up into two sets of water rights/permits 1) those that are located in the historic aquifer boundary by Hedges and others (1982) but not in the Upper Vermillion Missouri: South aquifer boundary delineated by Buhler (2014) and 2) water rights/permits that are located within both boundaries. 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 developed by the DANR-Water Rights Program for estimating average annual withdrawals by non-irrigation appropriations limited solely by diversion rate. It is likely an overestimate of water withdrawn by water rights/permits only limited by diversion rate. Water Permit No. 8745-3 is requesting 564

acre-feet of water to be appropriated for a one-time use with the following years of water use being non-consumptive by re-injecting the pumped water back into the aquifer (Water Rights, 2025c). Therefore, the average annual use for Water Permit No. 8745-3 that will be accounted for in the hydrologic budget will be 0 ac-ft/yr. Overall, the estimated average annual withdrawal rate for the LVM aquifer non-irrigation water rights/permits within the historic aquifer boundary (Hedges and others, 1982) is approximately 1,224.4 acre-feet/year, and approximately 48.6 acre-feet/year excluding water rights/permits that are in the Upper Vermillion Missouri: South delineation by Buhler (2014) (Table 2) (Water Rights, 2025c).

Table 2. Estimated average annual use for non-irrigation water rights/permits authorized to appropriate water from the LVM aquifer within the historic aquifer boundary by Hedges and others (1982) but not the UVM:S aquifer delineation by Buhler (2014), and non-irrigation water rights within aquifer boundary delineated by Hedges and others (1982) and Buhler's (2014) UVM:S boundary (Water Rights, 2025c).

Permit No.	Name	Uses	Status	Authorized Diversion Rate (cfs)	Authorized Annual Volume (acre-feet)	Estimated Use (acre-feet/year)
1870-3	UNIVERSITY OF SOUTH DAKOTA	INS	LC	0.03	NA	13.0
6397-3	SD DEPT OF TRANSPORTATION	INS	LC	0.033	NA	14.3
8222-3	SOUTHEAST FARMERS COOP	COM	PE	0.167	18.4	18.4
8257-3	THEIN WELL CO INC	COM	PE	0.089	1	1
8479-3	KNIFE RIVER	IND	PE	0.133	1.84	1.84
8745-3	UNIVERSITY OF SOUTH DAKOTA	GEO	PE	0.780	NA	0**
					Total:	48.6
3905-3*	CLAY RURAL WATER SYSTEM INC	RWS	LC	2	NA	868.8
5979-3*	CLAY RURAL WATER SYSTEM INC	RWS	LC	2	307	307
					Total:	1,175.8
				Combined Total:		1,224.4
*Within aquifer boundary delineated by Hedges and others (1982) and Buhler's (2014) UVM:S boundary						
**Water Permit No. 8745-3 is non-consumptive by reinjecting the same amount of water back into the aquifer.						
LC Licensed Water Right, PE Water Permit, INS Institutional, COM Commercial, RWS Rural Water System						

There are 90 irrigation water rights/permits appropriating water from the LVM aquifer within Hedges and others (1982) historical aquifer boundary (Water Rights, 2025c). Irrigation water rights/permits have been typically required to report their annual usage by submitting an irrigation questionnaire since 1979. However, due to changes in farming practices, new equipment, and an increase in the number of permits from 43 in 2006 to 71 in 2013, the average over the entire period of record may not be an accurate reflection of average annual irrigation withdrawal at the present time. The average annual withdrawal rate for the LVM aquifer within Hedges and others (1982) historical boundary for irrigation water rights/permits that have reported over the past ten years of record (2014 to 2023) is approximately 2,962 acre-feet per year (Table 3) (Water Rights, 2025a).

Currently, there are 67 irrigation water rights/permits appropriating water from the LVM aquifer within the current LVM aquifer boundary (Mathiowetz, 2018) excluding rights/permits within delineation UVM:S aquifer by Buhler (2014) (Water Rights, 2025c). However, due to changes in farming practices and an increase in the number of permits from 27 in 2006 to 45 in 2013, the average over the entire period of record may not be an accurate reflection of actual average annual withdrawal at the present time. The average annual withdrawal rate for the LVM aquifer irrigation water rights/permits that have reported over the past ten years of record (2014 to 2023) is approximately 1,929 acre-feet per year (Table 3) (Water Rights, 2025a).

Along with this pending application, there are nine irrigation water permits approved in 2023 (Nos. 8680-3, 8692-3, 8711-3, 8726-3, 8731-3, 8746-3, 8747-3, 8760-3, and 8775-3) that have not reported in the irrigation questionnaire compilation and need to be accounted for. The new permits are authorized to irrigate 1,048 acres, while this application proposes to irrigate approximately 43 acres. All together a total of 1,091 acres are planned to be irrigated (Water Rights, 2025c). Assuming one foot of water per acre per year, the withdrawal rate for these water permits/applications is approximately 1,091 acre-feet per year.

The average annual withdrawal rate for irrigation appropriations from 2014 to 2023 (Table 3) combined with the new 2023 permits and applications within Hedges and others (1982) historical aquifer boundary, is approximately 4,053 acre-feet per year (Water Rights, 2025a). The average annual withdrawal rate for irrigation appropriations from 2014 to 2023 (Table 3) combined with the new 2023 permits and applications within current LVM aquifer boundary (Mathiowetz, 2018) excluding water rights/permits within delineation UVM:S aquifer by Buhler (2014), is approximately 3,020 acre-feet per year (Water Rights, 2025a).

There are domestic wells completed into the LVM aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2025d). 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 LVM 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 LVM aquifer.

Table 3. Reported irrigation uses from the LVM aquifer for water right/permits within the historical boundary of LVM aquifer (Hedges and others, 1982) and the current boundary of LVM aquifer (Mathiowetz, 2018) excluding the delineation of the UVM:S aquifer (Buhler, 2014) (Water Rights, 2025a)

Historical Boundary of LVM aquifer (Hedges and others, 1982)			Current Boundary of LVM aquifer (Mathiowetz, 2018), Excluding UVM:S Aquifer Boundary (Buhler, 2014)		
Year	Number of Permit/License	Annual Pumpage (ac-ft/yr)	Year	Number of Permit/License	Annual Pumpage (ac-ft/yr)
1979	49	1163.0	1979	40	810.5
1980	47	2417.0	1980	38	1995.0
1981	49	1543.0	1981	39	1205.4
1982	37	870.0	1982	27	758.3
1983	38	716.3	1983	28	644.7
1984	47	691.0	1984	37	549.0
1985	46	1328.2	1985	36	927.2
1986	45	1047.5	1986	35	807.5
1987	37	1115.4	1987	27	794.4
1988	38	2083.8	1988	28	1442.4
1989	38	2301.2	1989	28	1522.2
1990	38	2113.2	1990	28	1288.2
1991	39	1670.1	1991	29	1044.1
1992	39	168.8	1992	29	116.7
1993	39	0.0	1993	29	0.0
1994	39	517.3	1994	29	308.7
1995	37	506.6	1995	28	368.2
1996	36	997.6	1996	27	572.9
1997	36	1085.0	1997	27	645.0
1998	36	1032.9	1998	26	736.6
1999	38	900.6	1999	27	698.9
2000	38	2041.7	2000	27	1574.9
2001	38	2037.0	2001	27	1781.8
2002	40	1762.3	2002	29	1123.2
2003	40	1800.6	2003	29	1470.6
2004	39	1747.5	2004	28	1167.6
2005	45	1410.2	2005	28	1071.1
2006	43	2674.5	2006	27	1734.3
2007	50	2909.1	2007	26	1327.0
2008	55	4301.3	2008	28	911.9
2009	58	482.6	2009	30	460.8
2010	59	144.6	2010	30	134.0
2011	62	2195.1	2011	33	1219.4
2012	61	7759.5	2012	33	3355.3
2013	71	4109.1	2013	45	2856.5
2014	75	1576.3	2014	48	1006.4
2015	78	1925.8	2015	50	1473.5
2016	79	2187.5	2016	51	1779.0
2017	79	3156.6	2017	52	2439.3
2018	79	427.7	2018	52	419.4
2019	79	339.6	2019	52	333.0
2020	78	3353.2	2020	51	1972.5
2021	80	5316.2	2021	54	3026.7

Historical Boundary of LVM aquifer (Hedges and others, 1982)			Current Boundary of LVM aquifer (Mathiowetz, 2018), Excluding UVM:S Aquifer Boundary (Buhler, 2014)		
Year	Number of Permit/License	Annual Pumpage (ac-ft/yr)	Year	Number of Permit/License	Annual Pumpage (ac-ft/yr)
2022	82	6309.1	2022	56	3838.7
2023	91	5027.6	2023	68	2996.4
Average (1979-2023)	52	1983.6	Average (1979-2023)	35	1260.2
Average (2014-2023)	80	2962.0	Average (2014-2023)	53	1928.5

Hydrologic Budget Summary

The average annual recharge rate for the unconfined portion of the historic LVM aquifer (Buhler, 2014) is approximately 8,778 acre-feet/year. The average annual recharge rate for the historic confined portion LVM aquifer (Hedges and others, 1982 & 1985) is approximately 2,104 acre-feet/year. Combining average annual recharge rate for both the confined and unconfined portions of the historic LVM aquifer, is approximately 10,882 acre-feet per year.

The average annual withdrawal rate from the LVM aquifer within Hedges and others (1982) historical aquifer boundary [the non-irrigation appropriations (1,224 acre-feet/year); the average annual withdrawal rate for irrigation appropriations from 2012 to 2023, the new 2023 water permits, and this application, (4,053 acre-feet/year)] is approximately 5,277 acre-feet per year, also shown on Table 4 (Water Rights, 2025a).

The average annual recharge rate for the unconfined portion of the LVM aquifer not enclosed in the UVM:S aquifer (Buhler, 2014) is approximately 4,580 acre-feet/year. The average annual recharge rate for the current confined portion LVM aquifer (Mathiowetz, 2018; Hedges and others, 1985) is approximately 1,960 acre-feet/year. Combining average annual recharge rate for both the current confined and unconfined portions of the LVM aquifer not enclosed in the UVM:S aquifer, is approximately 6,540 acre-feet per year.

The average annual withdrawal rate from the LVM aquifer within current aquifer boundary (Mathiowetz, 2018) excluding rights/permits within delineation UVM:S aquifer by Buhler (2014) [the non-irrigation appropriations (49 acre-feet/year); the average annual withdrawal rate for irrigation appropriations from 2014 to 2023, new 2023 water permits, and this applications (3,020 acre-feet/year)] is approximately 3,069 acre-feet per year, also shown on Table 4 (Water Rights, 2025a).

Water Permit No. 8745-3 proposes a one-time use of 564 acre-feet/year with an ongoing non-consumptive use of water due to reinjection of pumped water into the aquifer. Therefore, the one-time use is not included in the average annual use because the annual use will be 0 acre-feet/year.

Collectively, the average annual recharge rate for both the confined and unconfined portions of the LVM aquifer using the Buhler (2014) and Mathiowetz (2018) delineation of the aquifer is greater than the average annual withdrawal rate from both the historical LVM aquifer boundary

(Hedges and others, 1982) and the current LVM aquifer boundary (Mathiowetz, 2018). Furthermore, the average annual recharge to the aquifer exceeds the average annual withdrawals plus the one-time use for Water Permit No. 8745-3. Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the LVM aquifer for the proposed appropriation.

Table 4. List of water rights/permits withdrawals, new applications (if approved), one-time use for application withdrawals, and unconfined/confined recharge from both the historic boundary of the LVM and current boundary of the LVM excluding the UVM:S delineated areas made by Buhler (2014) (Water Rights, 2025a)

	Historical Boundary of the LVM Aquifer (Hedges and others, 1982) Pumpage (ac-ft/yr)	Current Boundary of the LVM Aquifer (Mathiowetz, 2018), Excluding UVM:S Aquifer Boundary (Buhler 2014) Pumpage (ac-ft/yr)
Non-Irrigation Appropriation	1,224	49
Irrigation Appropriation (2014-2023)	2,962	1,929
New Permits (2023)	1,048	1,048
This Application	43	43
Total Withdrawal	5,277	3,069
Water Permit No. 8745-3 one-time use (2023)	564	564
Unconfined Recharge	8,778	4,580
Confined Recharge	2,104	1,960
Total Recharge	10,882	6,540

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 DANR-Water Rights Program monitors ten observation wells completed into the LVM aquifer with two additional observation wells (CL-80J and CL-66AR) that are within both the historic aquifer boundary delineated by Hedges and others (1982) and Upper Vermillion Missouri: South aquifer boundary as defined by Buhler (2014), with observation wells in the area of this application shown on Figure 3 (Water Rights, 2025b). These observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The three closest observation wells to the diversion point are CL-80G (approximately 1.3 miles southeast), CL-57A (approximately 3.3 miles southeast), and CL-80IR (approximately 5.0 miles north) (Water Rights, 2025b). The water level elevations for these observation wells are displayed in

Figure 2 (Water Rights, 2025b). 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.

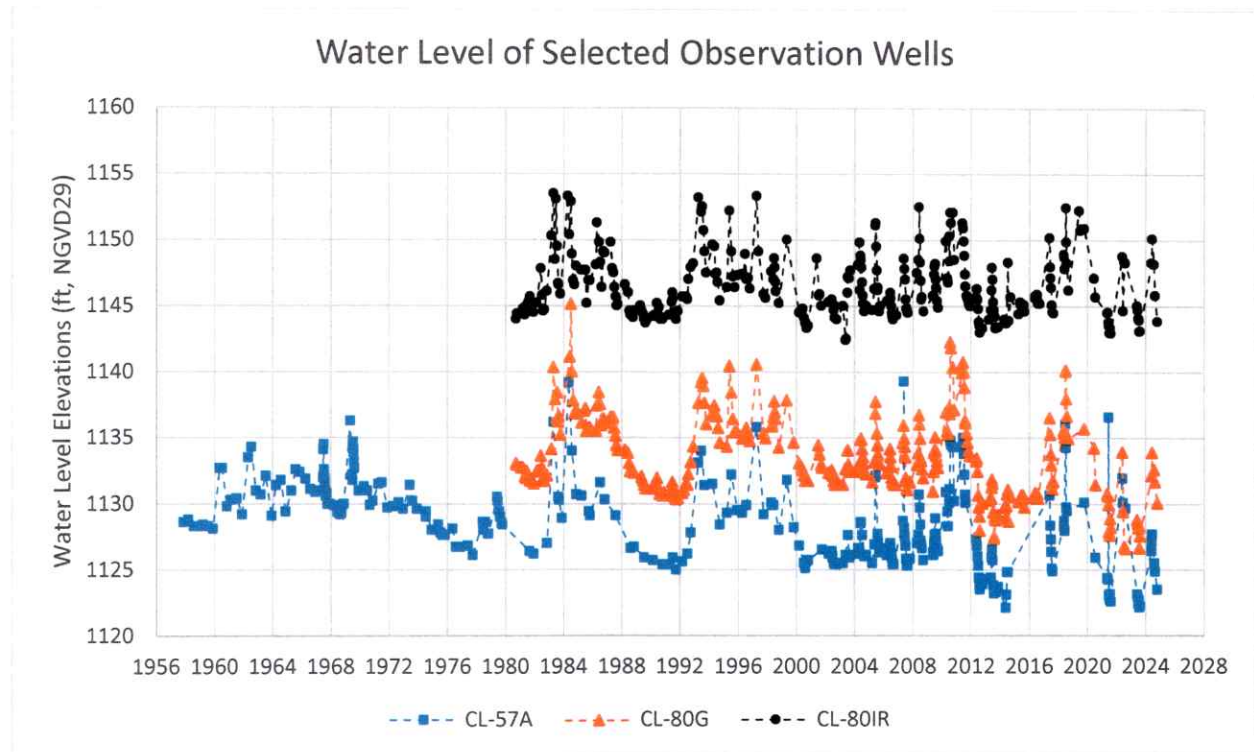


Figure 2. A hydrograph showing the elevation of water levels of observation wells CL-57A, CL-80G, and CL-80IR (Water Rights, 2025b)

A majority of the observation wells in the LVM aquifer have a relatively stable trend in the water level, as seen in Figure 2. The hydrographs for the LVM aquifer observation wells 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 with 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 LVM 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:

Water rights/permits in the general vicinity of the existing well site for this application are shown in Figure 3 and summarized in Table 5. The closest water right/permit to the existing diversion point for this application, not held by the applicant, is Water Permit Nos. 8459-3 and 7230-3 which is held by Paul Bremer. The diversion point for Water Permit Nos. 8459-3 & 7230-3 are

located approximately 0.5 miles northwest of the existing diversion point for this application (Water Rights, 2025c). There are domestic wells on file with the DANR-Water Rights Program that are completed into the LVM aquifer, with the closest domestic well on file (not held by the applicant) approximately 0.5 miles northwest of the diversion point based on the legal description provided by the well driller on the well completion report (Water Rights, 2025d). There could potentially be other domestic wells completed into the LVM aquifer near the diversion point that are not on file with the DANR-Water Rights Program.

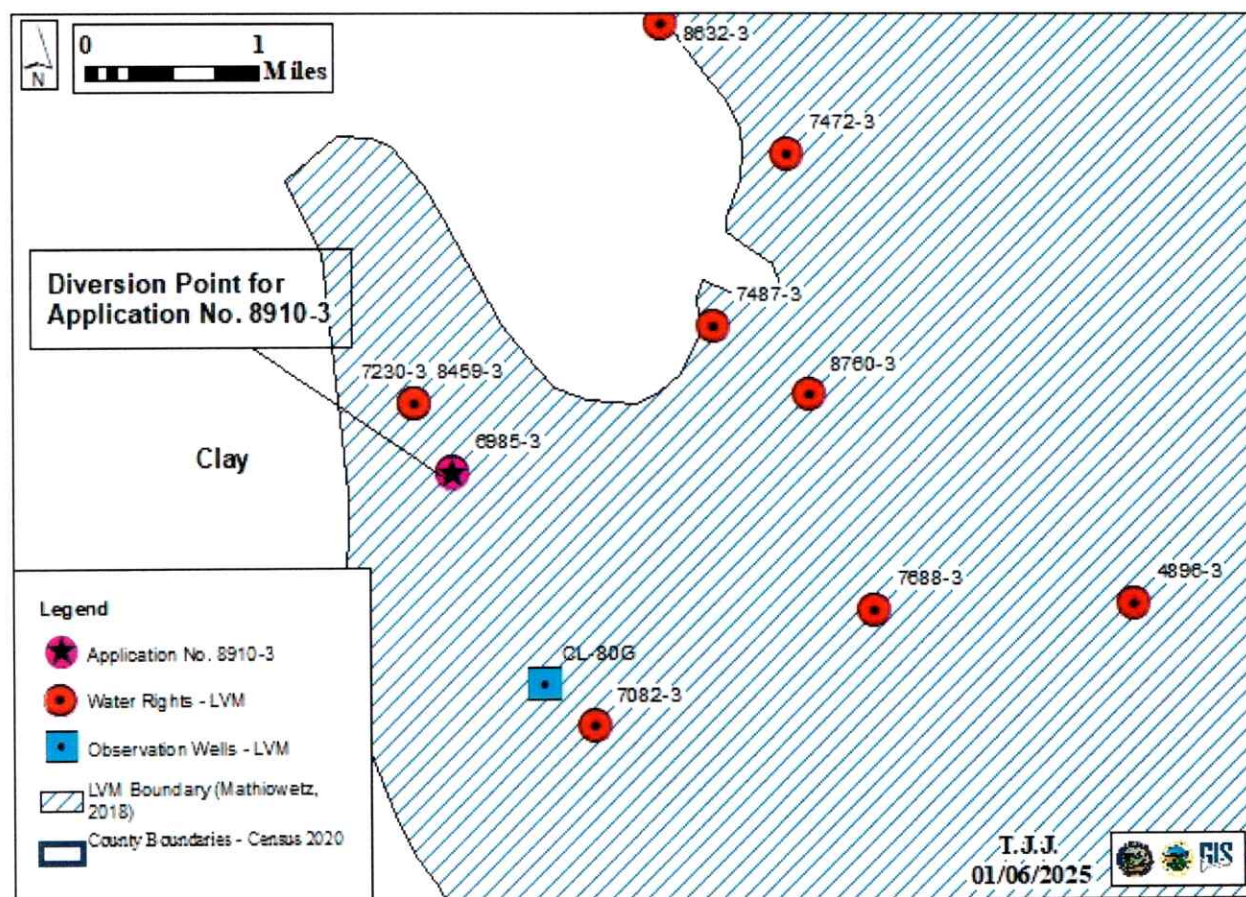


Figure 3. Map of the existing diversion point for Water Permit Application No. 8910-3, nearby LVM aquifer water rights/permits, and observation wells (Water Rights, 2025b and 2025c).

Table 5. List of water rights/permits shown in Figure 3 (Water Rights, 2025c).

Permit	Name/Business	Priority	Status	Use Type	CFS	Acres
4896-3	Margaret V. Manning	03/31/1982	License	Irrigation	1.56	111
6985-3	Nels J. Sorensen	02/25/2008	License	Irrigation	1.6	112
7082-3	Bottolfson Brothers	10/29/2008	License	Irrigation	1.56	138
7230-3	Paul Bremer	02/09/2011	License	Irrigation	1.33	71
7472-3	Paul Bremer	10/22/2012	License	Irrigation	1.78	134
7487-3	Bottolfson Brothers	10/29/2012	License	Irrigation	1.56	140
7688-3	Nicholas W. Olson	02/06/2013	License	Irrigation	0.47	33
8459-3	Paul Bremer	11/18/2020	Permit	Irrigation	0	40
8632-3	Bottolfson Brothers	02/03/2022	Permit	Irrigation	1.78	122
8760-3	Bottolfson Brothers	05/08/2023	Permit	Irrigation	2.22	172

Based on the well completion reports near the existing diversion point which is the well this application intends to use, the LVM aquifer is determined to be under confined conditions at the existing well site. 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 LVM aquifer at their location. The South Dakota Department of Agriculture & Natural Resources complaints database has no complaints about the LVM aquifer in Clay County (Water Rights, 2025e). When considering the statutes (SDCL 46-1-4 and 46-6-6.1), rules (ARSD 74:02:04:20(6) and (7)), history of irrigation in the area without any complaints of well interference (Water Rights, 2025e), and 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. 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. 8910-3 proposes to irrigate an additional 43 acres with no increase in diversion rate to what is authorized for irrigation by Water Right No. 6985-3. Water Right No. 6985-3 authorizes a maximum instantaneous diversion rate of 1.6 cfs from one well completed into the Lower Vermillion Missouri aquifer (184 feet deep) located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 22 for the irrigation of 112 acres located in the W $\frac{1}{2}$

SE ¼, E ½ SW ¼ Section 22; all in T93N-R52W. This application proposes to irrigate an additional 43 acres located in the SW ¼ Section 22-T93N-R52W from the existing well authorized by No. 6985-3. This application, if approved, and Water Right No. 6985-3 will authorize a combined total of 1.6 cfs to irrigate a combined total of 155 acres. The site of interest is located approximately 5 miles northwest of Vermillion, SD in Clay County.

2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the LVM aquifer to supply the proposed appropriation.
3. There is a reasonable probability that the diversion by Water Permit Application No. 8910-3 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

Reviewed by:



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

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- Water Rights, 2025c. Water Right/Permit Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2025d. Well Completion Reports, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2025e. 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.**

January 15, 2025

Nels Sorensen
2903 Sorensen Avenue
Vermillion SD 57069

Dear Mr. Sorensen:

Water Permit Application No. 8910-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Plain Talk printed in Vermillion SD (Ph # 605 624-2695) and the Daily Press & Dakotan printed in Yankton SD (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,

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. 8910-3 to Appropriate Water

Notice is given that Nels Sorensen, 2903 Sorensen Avenue, Vermillion SD 57069, has filed an application for a water permit to irrigate an additional 43 acres, with no increase to the rate of diversion. Water Right No. 6985-3 authorizes 1.6 cubic feet of water per second (cfs) from one well completed into the Lower Vermillion Missouri Aquifer (184 feet deep) located in the SE 1/4 SW 1/4 Section 22 for irrigation of 112 acres located in the W 1/2 SE 1/4, E 1/2 SW 1/4 Section 22; all in T93N-R52W. This application proposes to irrigate an additional 43 acres located in the SW 1/4 Section 22-T93N-R52W from the existing well authorized by No. 6985-3. This application, if approved, and Water Right No. 6985-3 will authorize a combined total of 1.6 cfs to irrigate a combined total of 155 acres. This site is located approximately five miles northwest of Vermillion SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8910-3 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 February 3, 2025.

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 February 3, 2025.

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.

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Wednesday, January 15, 2025 10:38 AM
To: Kelly Kronaizl
Subject: 8910-3 Nels Sorensen - Public Notice
Attachments: 8910-3 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on January 24, 2025, in the Plain Talk and Daily Press & Dakotan.

Nels Sorensen, 2903 Sorensen Avenue, Vermillion SD 57069, 605-624-4535, 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



AFFIDAVIT OF PUBLICATION

PLAIN TALK

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IAN 29 2025

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WATER

NELS SORENSEN
2903 SORENSEN AVE
VERMILLION SD 57069

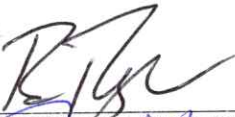
STATE OF SOUTH DAKOTA
COUNTY OF CLAY

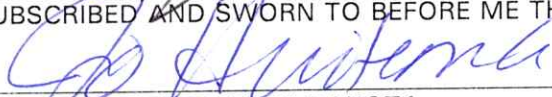
BETH RYE, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE ADVERTISING DIRECTOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
PLAIN TALK, A LEGAL WEEKLY NEWSPAPER PUBLISHED AND CIRCULATED
IN THE CITY OF VERMILLION, SAID COUNTY AND STATE, AND ONE OF
THE OFFICIAL 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 24th DAY OF January, 2025
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$43.20 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: 01/24/2025

FILED ON: 01/24/25


SUBSCRIBED AND SWORN TO BEFORE ME THIS 24th DAY OF January, 2025


NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 07/15/2028



JAN 29 2025

OFFICE OF
WATER

NOTICE OF APPLICATION NO. 8910-3 to Appropriate Water

Notice is given that Nels Sorensen, 2903 Sorensen Avenue, Vermillion SD 57069, has filed an application for a water permit to irrigate an additional 43 acres, with no increase to the rate of diversion. Water Right No. 6985-3 authorizes 1.6 cubic feet of water per second (cfs) from one well completed into the Lower Vermillion Missouri Aquifer (184 feet deep) located in the SE 1/4 SW 1/4 Section 22 for irrigation of 112 acres located in the W 1/2 SE 1/4, E 1/2 SW 1/4 Section 22; all in T93N-R52W. This application proposes to irrigate an additional 43 acres located in the SW 1/4 Section 22-T93N-R52W from the existing well authorized by No. 6985-3. This application, if approved, and Water Right No. 6985-3 will authorize a combined total of 1.6 cfs to irrigate a combined total of 155 acres. This site is located approximately five miles northwest of Vermillion SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8910-3 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 February 3, 2025.

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 February 3, 2025.

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 \$43.20 and can be viewed free of charge at www.sdpublicnotices.com

Published January 24, 2025.

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

NELS SORENSEN
2903 SORENSEN AVE
VERMILLION SD 57069

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

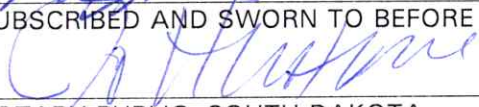
KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND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

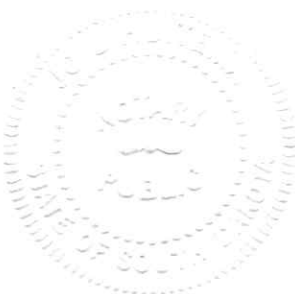
TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 24th DAY OF January, 2025
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
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RECEIVED

JAN 27 2025

OFFICE OF
WATER

Ad text :

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JAN 27 2025

OFFICE OF
WATER



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

FEB 26 2025

Nels Sorensen
2903 Sorensen Avenue
Vermillion SD 57069

Dear Mr. Sorensen:

Enclosed is Water Permit No. 8910-3 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**

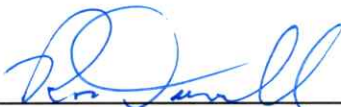
Pursuant to SDCL § 46-2A-4, public notice of the following application was posted on the DANR web site at <https://danr.sd.gov/public>. The posted public notice is the same notice as published in the pertinent newspaper(s) and a copy of the public notice is maintained in the application file. If the 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.: 8910-3

Name of Applicant: Nels Sorensen

Date of Posting: 1/21/2025

Date of Removal: 2/26/2025



Ron Duvall, Engineer III

2/26/2025

Date

Subscribed and sworn to before me, a notary public, this 26th day of Feb, 2025.



Notary Public - South Dakota
My commission expires May 16, 2029



(SEAL)

8910-3

RECEIVED

MAR 05 2025

OFFICE OF
WATERNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate March 3, 2025TO: Water Rights Program, DANR
523 E. Capitol
Pierre, SD 57501-3181

FROM:

Grant Sorensen

(name)

2903 Sorensen Av

(address)

Vermillion SD 57069

(city, state, zip)

605-670-7574

(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. 8910-3 states that the water use system is to be constructed by March 3, 2025, and water is to be put to beneficial use by April 1, 2025.

(date) (date)

The water use system was completed on March 3, 2025.

(date)

Applying the water to beneficial use was completed on March 3, 2025.

(date)

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

But Sorensen

(signature)



* 3.5.25 CALLED LEFT VM ASKING ABOUT IF
OWNERSHIP TRANSF. WAS NEEDED



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

Nels Sorensen
2903 Sorensen Ave
Vermillion, SD 57069

No. 8910-3

March 6, 2025

Dear Mr. Sorensen:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that, Grant Sorensen, sent in to let us know that you are completed with your water use system.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

Miranda Smith
Water Rights Program
(605) 773-3352
email: Miranda.Smith@state.sd.us