

WATER PERMIT NO. 8492-3

Name of Applicant: **Tim or Kari Ostrem**

Address: **45924 300 St, Centerville SD 57014**

Phone: **605 530-1505**

Amount of Water Claimed: **no add'l**

Total Acres: **180 acres**

Source of Water Supply: **groundwater (1 existing well)**

Water to be used for: **irrigation**

County: **Clay**

Type of Waste Disposal System:

Location: **6 miles southwest of Centerville**

PRIORITY

Date Received: **2-19-21**

Application/License Fee: **\$ 1050**

Corrected Application Received:

Period of Annual Use: **May 1 – October 31**

Remarks: **Using well authorized by Water Right No. 7111-3**

Diversion Point: **approximate center of SE 1/4 Sec**

17-T95N-R52W

Land to be Irrigated: **E 1/2 SE 1/4, SW 1/4 Sec 17-**

T95N-R52W

Depth of Well: **160 feet deep**

Well Driller:

Remarks:

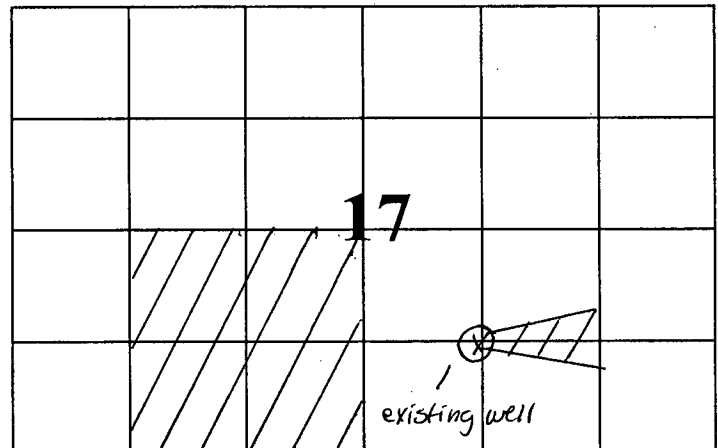
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **2-22-21**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA
WATER PERMIT NO. 8492-3

Date of first receipt of application February 19, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8492-3 to Tim or Kari Ostrem, 45924 300th St, Centerville SD 57014 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. 8492-3 authorizes irrigation of 180 new acres. Water Right No. 7111-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Upper Vermillion Missouri:South Aquifer (156 feet deep) located in the approximate center of the SE 1/4 Section 17 to irrigate 130 acres located in the SE 1/4 Section 17; all in T95N-R52W. This permit authorizes irrigation of 180 new acres located in the E 1/2 SE 1/4 and the SW 1/4 Section 17- T95N-R52W from the existing well. This permit and Water Right No. 7111-3 will authorize a total diversion of 1.78 cfs for irrigation of 310 acres. This site is located approximately 6 miles southwest of Centerville 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 February 19, 2021.
4. The date of approval of Permit No. 8492-3 is May 3, 2021.
5. One-fifth of the construction is to be completed on or before November 3, 2023.
6. All construction is to be completed on or before May 3, 2026.
7. Water is to be put to beneficial use on or before May 3, 2030.
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. 8492-3 and Water Right No. 7111-3 is located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit and No. 7111-3 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. Water Permit No. 8492-3 and Water Right No. 7111-3 authorize a combined diversion rate of 1.78 cfs for the irrigation of 310 acres.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

MAY 17 2021
date



Ron Davall

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8492-3</u> (office use only) Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>
	Newspaper <u>Plain Talk</u>
	<u>Press & Dakotan</u>

PAID
FEB 19 2021
Ck# 6267

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. 7111-3
(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 Tim or Keri Ostrem

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

Mailing Address 45924 300st Centerville SD 57014
(Address) (City) (State) (Zip Code)

Phone 605 530 1505 Mobile same Email +Kostrem@gmail.com
(no add'l)

2. Amount of water claimed 1.78 *CFS or 800 **GPM --- ***AF Total Acreage 180
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply groundwater existing well

4. Location of point of diversion SE 1/4 95-52-17 (approximate center)
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
Riverside Township County Clay

5. County or counties where water will be used Clay

6. Annual period during which water is to be used May - Oct April - Oct

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
NW 1/4 of SW 1/4	40	East 1/2 of SE 1/4	20
SW 1/4 of SW 1/4	40		
NE 1/4 of SW 1/4	40	Sec 17-T95N-R52W	
SE 1/4 of SW 1/4	40		

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

Added acres to permit 7111-3

RECEIVED

FEB 19 2021

WATER RIGHTS
PROGRAM

I, Tim Ostrem Keri Ostrem Farmer, 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.

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 _____ Provide copy of log(s), if available. Drilled by Hammond Wetmore

For either Existing or Proposed Wells:

On File with the Water Rights Program

c) Well Depth (required) _____ 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)

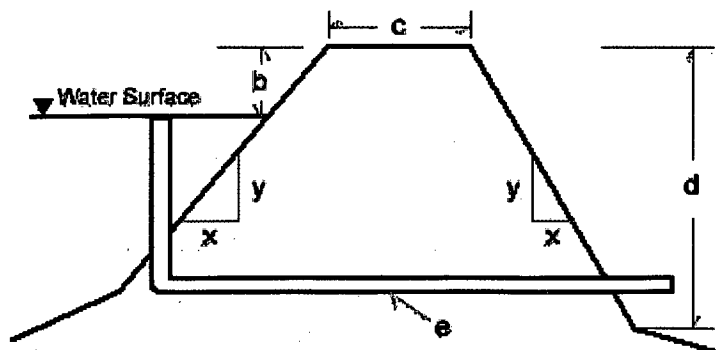
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



Date: SEP 17 2011

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Environment and Natural Resources

Date February 19, 2021

RECEIVED OF Tim/Kari Ostrem 45924 300 St Centerville SD 57014

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

Fee for Application for Permit No. <u>8492-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$850.00
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$
Fee to retain Future Use Permit No. _____ after period of seven years.	\$
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8492-3</u>	\$200.00
Fee for Filing Transfer Form _____	\$
Fee for _____	\$
Fee for Issuing New Well Driller's License No. _____	\$
Fee for Renewal of Well Driller's License No. _____	\$
Fee for Issuing Well Pump Installer's License No. _____	\$
Fee for Renewal of Well Pump Installer's License No. _____	\$
(Any Other Work Provided by Law)	
TOTAL	\$1050.00

By Eric Gronlund
Chief Engineer
me

Water Rights Program - File Documentation

NAME: Tim Ostrem

ADDRESS: Centerville SD

DATE: 3-4-21

RE: Pending application

COMMENTS:

I called Tim Ostrem to make sure he was in agreement with changing the period of annual use from May - Oct to April - October as listed on his existing permit No. 7111-3. He said of course!

Karen Schlaak

Karen Schlaak
Water Rights Program



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8492-3, Tim or Kari Ostrem**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8492-3, Tim or Kari Ostrem, 45924 300 St, Centerville SD 57014.

The Chief Engineer is recommending APPROVAL of Application No. 8492-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under Water Permit No. 8492-3 and Water Right No. 7111-3 is located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit and No. 7111-3 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. Water Permit No. 8492-3 and Water Right No. 7111-3 authorize a combined diversion rate of 1.78 cfs for the irrigation of 310 acres.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Grönlund, Chief Engineer
April 12, 2021

Report to the Chief Engineer

On Water Permit Application No. 8492-3

Tim or Kari Ostrem

April 12, 2021

Water Permit Application No. 8492-3 proposes to irrigate 180 acres located in the E $\frac{1}{2}$ SE $\frac{1}{4}$ and the SW $\frac{1}{4}$ of Section 17-T95N-R52W from an existing well authorized under Water Right No. 7111-3. The applicant holds Water Right No. 7111-3 which authorizes a maximum instantaneous diversion rate of 1.78 cubic feet of water per second (cfs) from one well completed into the Upper Vermillion Missouri: South aquifer (156 feet deep) and located in the approximate center of the SE $\frac{1}{4}$ of Section 17 to irrigate 130 acres located in the SE $\frac{1}{4}$ of Section 17; all in T95N-R52W. If approved, Water Permit Application No. 8492-3 and Water Right No. 7111-3 will collectively authorize a maximum instantaneous diversion rate of 1.78 cfs for the irrigation of 310 acres. The site of interest is located in Clay County approximately six miles southwest of Centerville, South Dakota.

It is worth noting, Water Right No. 7111-3 was labeled as withdrawing from the Lower Vermillion Missouri aquifer; however, investigations completed since approval of the water right have determined the well authorized under Water Right No. 7111-3 is completed into the Upper Vermillion Missouri: South aquifer.

AQUIFER: Upper Vermillion Missouri: South (UVM: S)

HYDROGEOLOGY:

The Upper Vermillion Missouri aquifer is a glacial outwash that is composed of fine sand to medium-pebble gravel (Lindgren and Hansen, 1990). The aquifer generally lays in a bedrock valley that trends northwest to southeast with the direction of groundwater movement generally to the south/southeast (Lindgren and Hansen, 1990; Holmes and Filipovic, 2015). Most of the Upper Vermillion Missouri aquifer is overlain by till that can be up to 160 feet thick but in some localized areas, the aquifer can be encountered near the ground surface (Holmes and Filipovic, 2015). From 2013 to 2014, the SD DENR-Geological Survey completed a study to further understand the geologic and hydrologic conditions of the Upper Vermillion Missouri aquifer (Holmes and Filipovic, 2015). As a result, the aquifer is now divided into three management units (i.e. North, South, and West) that were adopted by the Water Management Board at the March 6, 2014 meeting (Water Rights, 2014). It is worth noting that of the south boundary of the Upper Vermillion Missouri aquifer Buhler (2014) states, "Although the southern boundary has not been delineated at this time, data shows that it extends south several miles from the original border as it merges with or transitions into the Lower Vermillion Missouri aquifer." Although described as not yet delineated, the mapping and areas presented in Buhler (2014) reflected a southern boundary for the Upper Vermillion Missouri aquifer extending several miles south from the original border and include sufficient information to allow for the examination of water available in the South management unit of the Upper Vermillion Missouri aquifer.

The well the applicant proposes to use for this application is located in the South management unit of the Upper Vermillion Missouri aquifer. The areal extent of the Upper Vermillion Missouri: South aquifer is approximately 78,820 acres in Clay, Lincoln, and Turner Counties (Figure 1) (Buhler, 2014). The Upper Vermillion Missouri: South aquifer is generally under confined conditions except near the Clay-Turner County line where the aquifer is in hydraulic connection with the overlying Parker Centerville aquifer (Lindgren and Hansen, 1990; Holmes and Filipovic, 2015).

A water well completion report was submitted with Water Permit Application No. 8492-3 for an existing well (156 feet deep) located in the NW ¼ SE ¼ of Section 17-T95N-R52W and authorized by Water Right No. 7111-3. The well completion report lists “Clay, yellow brown, pebbly (Till)” from 0 to 25 feet below the ground surface, “Clay, gray-brown, pebbly (Till)” from 25 to 101 feet and “Sand, green, coarse to med grained” from 101 to 160 feet (Water Rights, 2021c). The well was screened from 106 to 156 feet below grade and had a static water level of 82 feet below the ground surface at the time of completion (August 3, 2011) (Water Rights, 2020d). Based on the submitted well completion report and lithologic logs on file for nearby observation wells and water rights/permits, the Upper Vermillion Missouri: South aquifer is expected to be confined at the well location the applicant proposes to use (SDGS, 2021; Water Rights, 2021a, 2021b and 2021c).

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

Pursuant to SDCL 46-2A-9, “A permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant’s proposed use, that the diversion point can be developed without unlawful impairment of existing rights, and that the proposed use is a beneficial use and in the public interest.” This report will address the availability of unappropriated water and the potential for unlawful impairment of existing water rights within the Upper Vermillion Missouri: South aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8492-3 proposes to appropriate water from the Upper Vermillion Missouri: South 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 Upper Vermillion Missouri: South 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 Upper Vermillion Missouri: South aquifer must be considered.

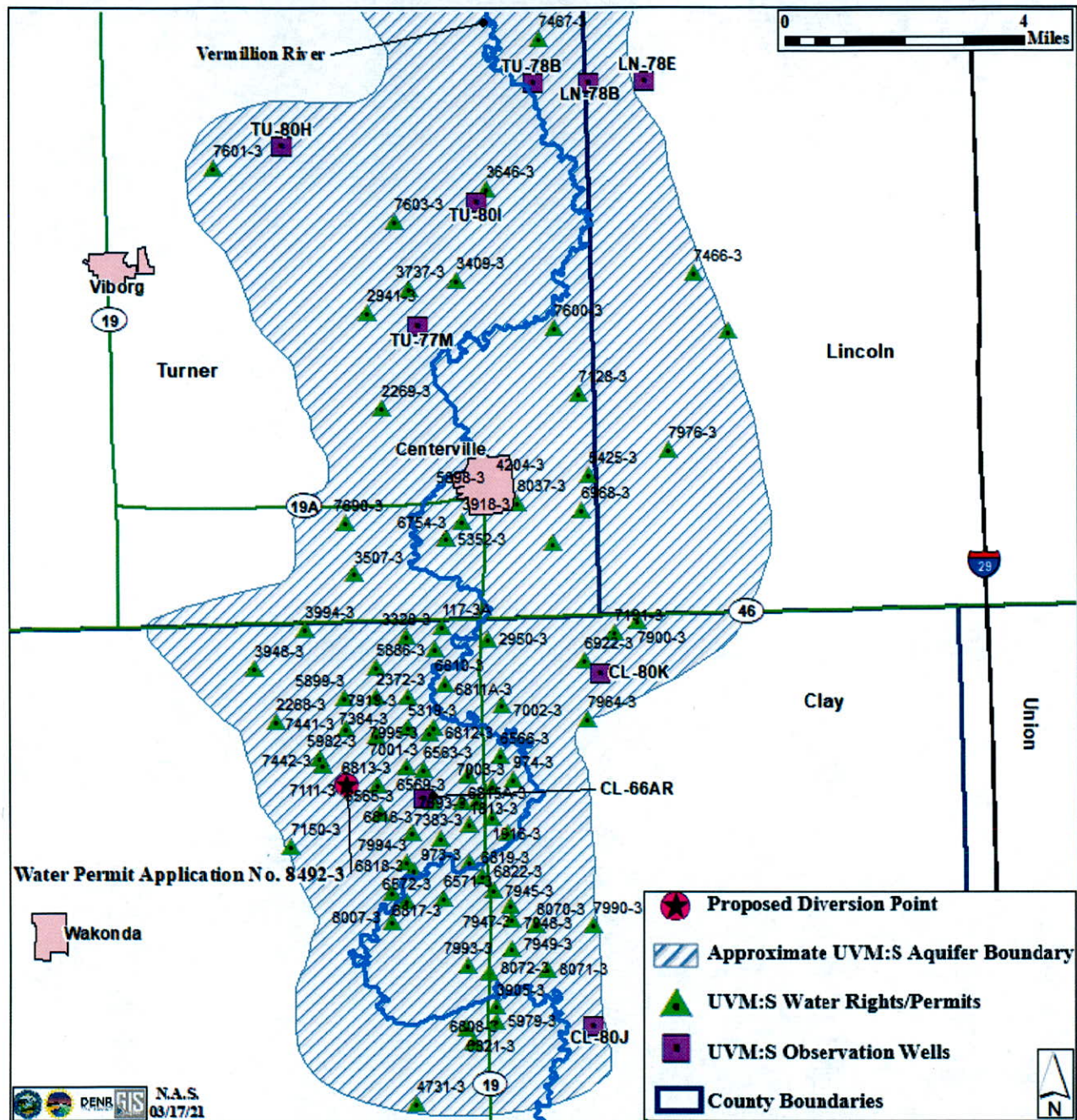


Figure 1. Map of the approximate Upper Vermillion Missouri: South aquifer delineated from Buhler (2014), the location of the well the applicant proposes to use for Water Permit Application No. 8492-3, and the Upper Vermillion Missouri: South aquifer water rights/permits and observation wells (Water Rights, 2021a and 2021b)

Recharge

Recharge to the Upper Vermillion Missouri aquifer occurs primarily through the infiltration of precipitation where the aquifer is at or near the ground surface. Additional recharge occurs where the Upper Vermillion Missouri aquifer is in direct contact with the Parker-Centerville aquifer (Holmes and Filipovic, 2015). There has been no quantification of the specific recharge rate to the Upper Vermillion Missouri: South aquifer. However, Hedges and others (1985) estimated a

recharge rate of 0.25 inches per year using a regional flow net analysis for the entire Upper Vermillion Missouri as delineated at that time. The Upper Vermillion Missouri aquifer as delineated by Hedges and others (1982) had the North, South, and West management units as one singular aquifer. Applying the 0.25 inches per year recharge rate over the current areal extent of the Upper Vermillion Missouri: South aquifer leads to an estimated recharge rate of 1,642 acre-feet per year for the Upper Vermillion Missouri: South aquifer. This recharge rate is lower than what the observation well data shows and Buhler's (2014) flow net analysis estimate.

2014 Flow Net Analysis

Buhler (2014) completed an analysis of the Upper Vermillion Missouri aquifer that indicates recharge exceeded withdrawals from the Upper Vermillion Missouri: South aquifer by an estimated 5,637 to 8,223 acre-feet per year at that time based on estimated groundwater outflow from the Upper Vermillion Missouri: South aquifer. Buhler's (2014) analysis included all previously defined Upper Vermillion Missouri and Lower Vermillion Missouri aquifer water rights/permits that are now identified as withdrawing water from the South management unit of the Upper Vermillion Missouri aquifer. On the March 6, 2014 Water Management Board meeting, the Board approved twelve water permit applications: Nos. 7441-3, 7442-3, 7466-3, 7467-3, 7600-3, 7601-3, 7603-3, 7623-3, 7653-3, 7690-3, 7900-3, and 7919-3 (Water Rights, 2014 and 2021b). However, Water Permit Nos. 7623-3 and 7653-3 were cancelled in 2018 (Water Rights, 2021b). The remaining ten water permits authorize the irrigation of 1,295.83 acres (Water Rights, 2021b). Buhler (2014) calculated an average annual application rate per permitted acre from the Upper Vermillion Missouri aquifer of six inches per permitted acre. Using Buhler's (2014) *average application rate per permitted acreage* for the Upper Vermillion Missouri aquifer, the average annual withdrawal rate that is expected from these ten Upper Vermillion Missouri: South aquifer water permits is approximately 648 acre-feet per year.

The Water Management Board has approved 20 additional water permit applications for wells completed into the Upper Vermillion Missouri: South aquifer since the March 6, 2014 Board meeting and the use type for each permit was irrigation (Water Rights, 2021b). These 16 water permits authorize the irrigation of 1,758.06 acres. Using Buhler's (2014) *average application rate per permitted acreage* for the Upper Vermillion Missouri aquifer, the average annual withdrawal rate that is expected from these Upper Vermillion Missouri: South aquifer water permits is approximately 879 acre-feet per year.

Additionally, there are two pending applications for the Upper Vermillion Missouri: South aquifer, Water Permit Application Nos. 8469-3 and 8470-3, collectively requesting 4.0 cfs for the irrigation of 274 acres. When taking into account the requested irrigation of 180 acres by this water permit application and by using Buhler's (2014) *average application rate per permitted acreage* for the Upper Vermillion Missouri aquifer, the average annual withdrawal rate for the pending applications and this application that is expected from the Upper Vermillion Missouri: South aquifer is approximately 227 acre-feet per year.

Table 1 summarizes these 33 Upper Vermillion Missouri: South aquifer water rights/permits and their estimated use based on Buhler's (2014) *average application rate per permitted acreage* for

the Upper Vermillion Missouri aquifer. Collectively, the average annual withdrawal rate for the Upper Vermillion Missouri: South aquifer water rights/permits, either approved after the March 6, 2014 Water Management Board meeting or currently pending, is approximately 1,754 acre-feet per year (Table 1). Therefore, since Buhler's (2014) analysis estimated recharge exceeds withdrawals by 5,637 to 8,223 acre-feet per year, there is a reasonable probability that unappropriated water is available to supply this proposed appropriation.

Table 1. Estimated use for the Upper Vermillion Missouri: South aquifer water rights/permits that were approved after the March 6, 2014 Water Management Board meeting, or currently pending (Water Rights, 2021b)

Permit No.	Name	Priority Date	Status	Use	Acres	Estimated Use (acre-feet/year)
6811A-3	Jesse & Tanya Vandestroet	04/10/2014	PE	IRR	115	57.5
6820A-3	Jesse & Tanya Vandestroet	01/23/2014	PE	IRR	43	21.5
7383-3	Metabank	07/20/2012	PE	IRR	25	12.5
7384-3	Nicholas & Courtney Blake	07/20/2012	PE	IRR	80	40
7441-3	Jason or Alicia Knutson	09/26/2012	PE	IRR	140	70
7442-3	Leah Johnson	09/26/2012	PE	IRR	40	20
7466-3	Bethel Hagen Trust	10/18/2012	PE	IRR	152	76
7467-3	Cleland Hagen Trust	10/18/2012	PE	IRR	152	76
7600-3	Michael D Stevens	12/28/2012	PE	IRR	180	90
7601-3	Michael D Stevens	12/28/2012	PE	IRR	132	66
7603-3	Michael D Stevens	12/28/2012	PE	IRR	120	60
7690-3	Tim or Dave Ostrem	12/20/2013	PE	IRR	160	80
7693-3	Metabank	02/06/2013	PE	IRR	27.7	13.85
7900-3	Leon Thompson	09/11/2013	PE	IRR	136	68
7919-3	Larry & Marlene Erickson	10/23/2013	PE	IRR	83.83	41.915
7945-3	Brad R or Linda R Trudeau	01/17/2014	PE	IRR	60	30
7947-3	Leon, Holly and Jordan Rozeboom	01/23/2014	PE	IRR	133.44	66.72
7948-3	Majestic Farms LLP	01/23/2014	PE	IRR	55.02	27.51
7949-3	Jesse & Tanya Vandestroet	01/23/2014	PE	IRR	100.9	50.45
7964-3	Paul, Mike & John Shubeck	02/12/2014	PE	IRR	128	64
7976-3	Vasgaard Properties	02/27/2014	PE	IRR	160	80
7990-3	Robert P Walsh	04/02/2014	PE	IRR	240	120
7993-3	Jesse & Tanya Vandestroet	04/10/2013	PE	IRR	53	26.5
7994-3	Metabank	04/10/2014	PE	IRR	72	36
7995-3	Jesse & Tanya Vandestroet	04/10/2014	PE	IRR	25	12.5
8007-3	Louis Latendresse	04/18/2014	PE	IRR	150	75
8037-3	Tyler Anderson	06/10/2014	PE	IRR	103	51.5
8070-3	Hansen Irrigated Farms LLC	01/07/2015	PE	IRR	96	48
8071-3	Hansen Irrigated Farms LLC	01/07/2015	PE	IRR	51	25.5
8072-3	Jesse & Tanya Vandestroet	01/07/2015	PE	IRR	40	20
8469-3	Double A Farms LLC	03/15/2021	Pending	IRR	114	57
8470-3	Nicholas Blake	03/22/2021	Pending	IRR	160	80
8492-3	Tim or Kari Ostrem	02/19/2021	Pending	IRR	180	90
PE: Water Permit, IRR: Irrigation				TOTAL:	3,508	1,754

Discharge

Discharge from the Upper Vermillion Missouri aquifer occurs through evapotranspiration where the aquifer is near the ground surface, to other glacial aquifers, and through well withdrawals (Niehus, 1997; Holmes and Filipovic, 2015; Water Rights, 2021b).

Currently, there are 86 water rights/permits authorized to appropriate water from the Upper Vermillion Missouri: South aquifer, plus two pending water permit applications (Water Rights, 2021b). The average annual withdrawal rate for the Upper Vermillion Missouri: South aquifer water rights/permits, either approved after the March 6, 2014 Water Management Board meeting or currently pending, is approximately 1,754 acre-feet per year.

There are domestic wells completed into the Upper Vermillion Missouri: South aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2021c). Due to their relatively low diversion rates, withdrawals from domestic wells are not considered to be a significant portion of the withdrawal rate from the Upper Vermillion Missouri: South aquifer. Additionally, with the development of rural water systems in areas where the Upper Vermillion Missouri: South 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 withdrawal rate for the Upper Vermillion Missouri: South aquifer.

Hydrologic Budget Summary

Buhler's (2014) analysis of the Upper Vermillion Missouri aquifer indicates recharge exceeded withdrawals from the Upper Vermillion Missouri: South aquifer by an estimated 5,637 to 8,223 acre-feet per year at that time. That analysis included all previously defined Upper Vermillion Missouri and Lower Vermillion Missouri aquifer water rights/permits that are now identified as withdrawing water from the South management unit of the Upper Vermillion Missouri aquifer (Buhler, 2014). The average annual withdrawal rate for the Upper Vermillion Missouri: South aquifer water rights/permits, either approved after the March 6, 2014 Water Management Board meeting or currently pending, is approximately 1,754 acre-feet per year. Therefore, there is a reasonable probability that unappropriated water is available to supply this 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 DENR-Water Rights Program monitors nine observation wells completed into the Upper Vermillion Missouri: South aquifer (Water Rights, 2020b). These observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The three closest observation wells to the well the applicant proposes to use are CL-66AR (approximately 1.3 miles east), CL-80K (approximately 4.6 miles northeast), and CL-80J (approximately 5.8 miles southeast) (as shown in Figure 1). The hydrographs for these observation wells are displayed in Figures 2 to 4 (Water Rights, 2021a). 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. The hydrographs for the Upper Vermillion Missouri: South 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 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 in water levels of the aquifer rather than the impacts of pumping from the Upper Vermillion Missouri: South 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.

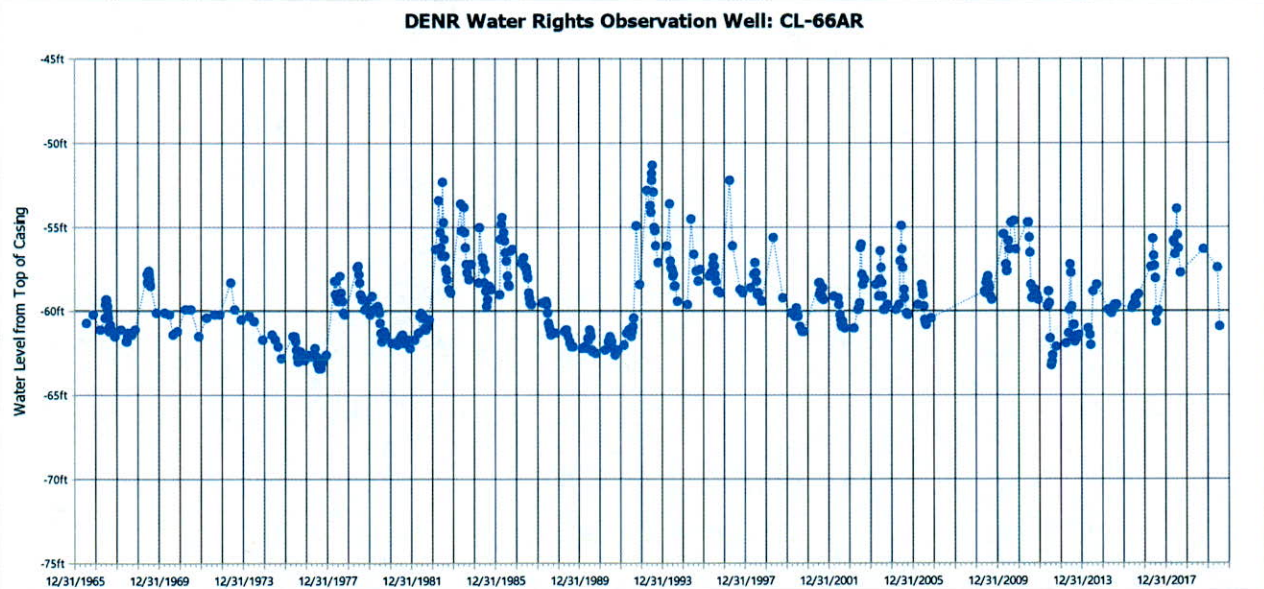


Figure 2. Hydrograph for observation well CL-66AR (Water Rights, 2021a)

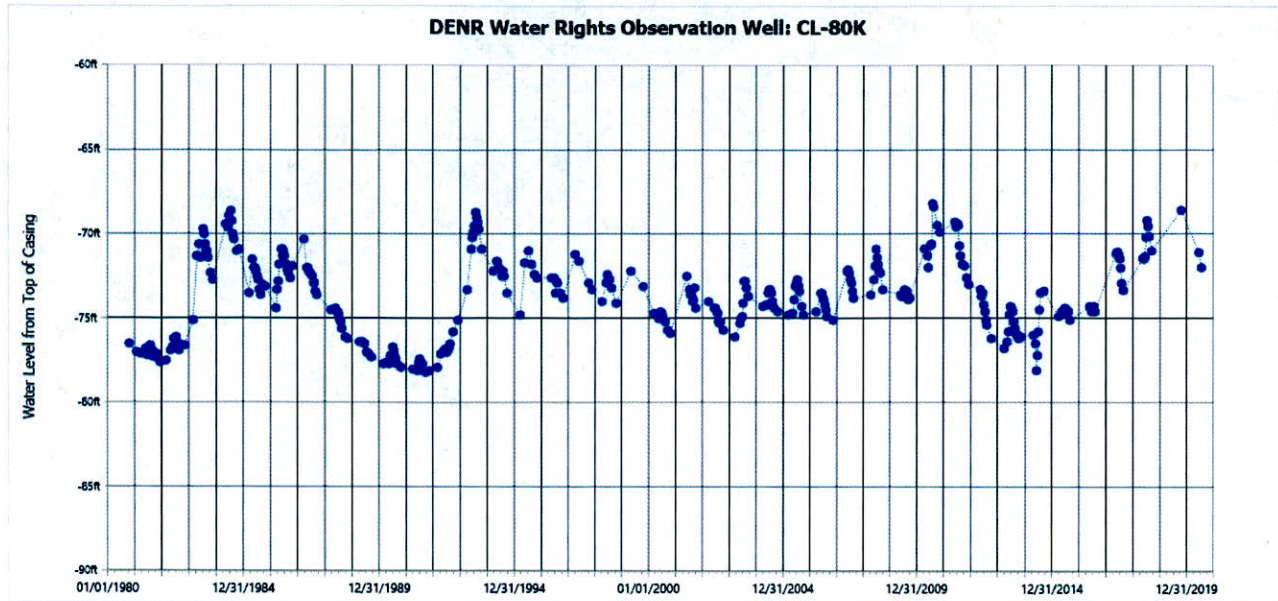


Figure 3. Hydrograph for observation well CL-80K (Water Rights, 2021a)

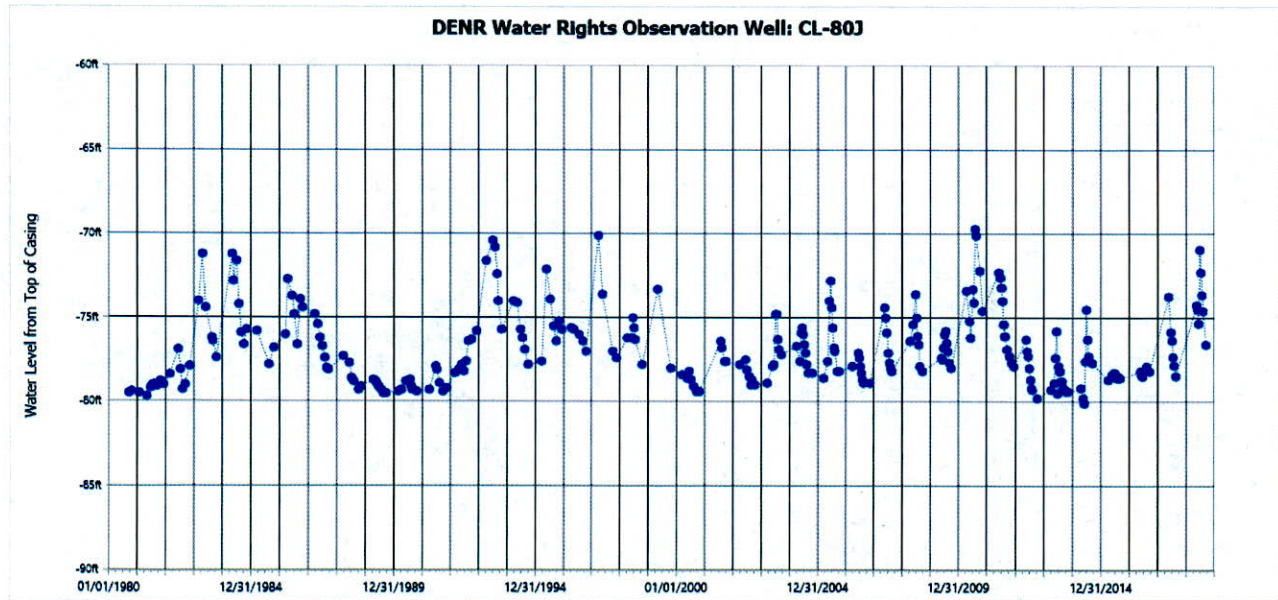


Figure 4. Hydrograph for observation well CL-80J (Water Rights, 2021a)

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are 86 water rights/permits authorized to appropriate water from the Upper Vermillion Missouri: South aquifer, plus two pending water permit applications (Water Rights, 2021b). The closest water right/permit to the site of interest is Water Right No. 6813-3, which is held by Rus Farms Real Estate LLC. The diversion point for Water Right No. 6813-3 is located approximately 0.5 miles east of the well the applicant proposes to use for this application (Figure 5) (Table 2) (Water Rights, 2021b).

There are domestic wells on file with the DENR-Water Rights Program that are completed into the Upper Vermillion Missouri: South aquifer, with the closest domestic well on file (not held by the applicant) approximately 0.6 miles southeast of the well the applicant proposes to use (Water Rights, 2021b). There are potentially other domestic wells completed into the Upper Vermillion Missouri: South aquifer near the well the applicant proposes to use that are not on file with the DENR-Water Rights Program.

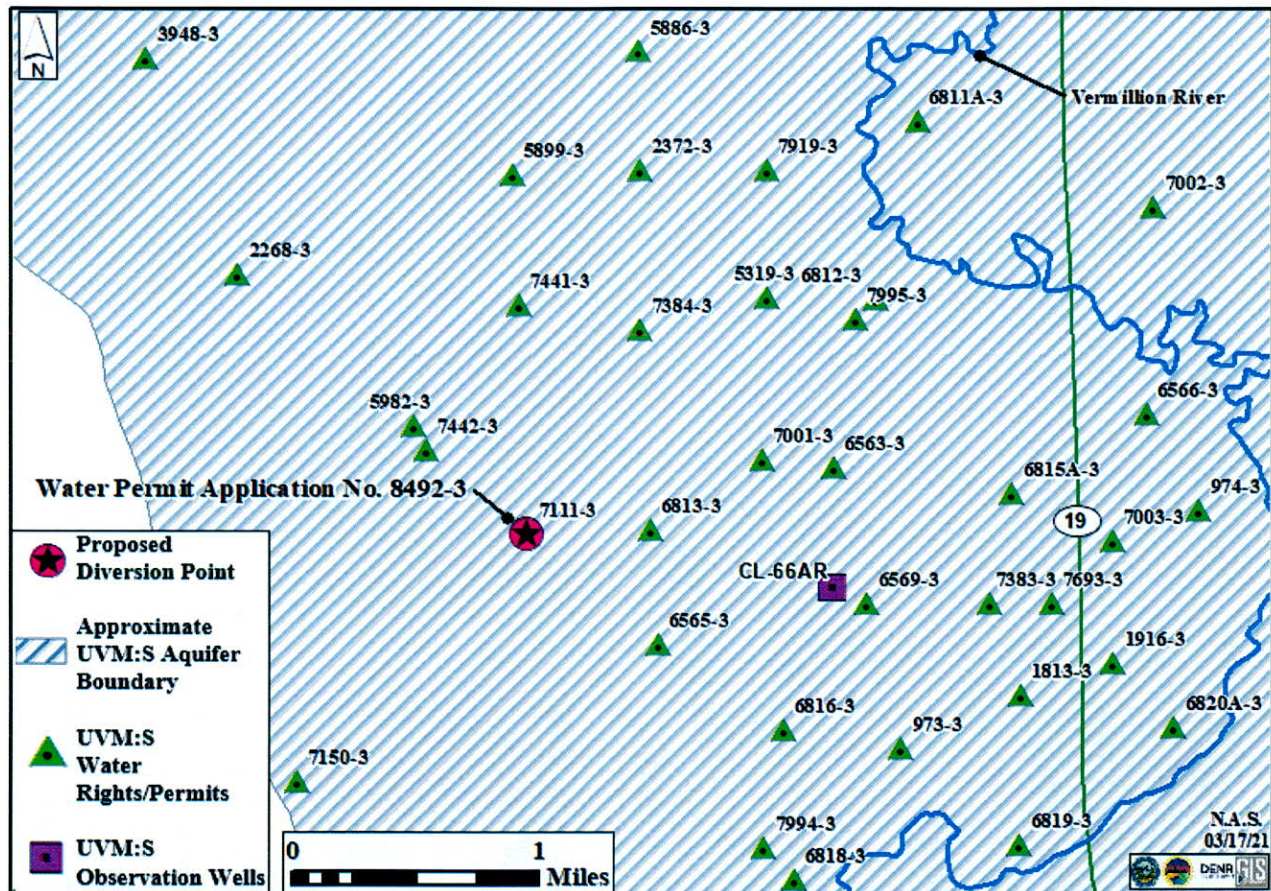


Figure 5. Location of the well the applicant proposes to use for Water Permit Application No. 8492-3 with the Upper Vermillion Missouri: South aquifer water rights/permits and observation well within approximately two miles (Water Rights, 2021a and 2021b)

Table 2. Water rights/permits authorized to withdraw water from the Upper Vermillion Missouri: South aquifer within approximately two miles of the well the applicant proposes to use, as shown in Figure 5 (Water Rights, 2021b)

Permit No.	Name	Status	Use	Diversion Rate (cfs)
973-3	Nicholas & Courtney Blake	LC	IRR	1.78
974-3	Metabank	LC	IRR	1.67
1813-3	Metabank	LC	IRR	2.06
1916-3	Troy & Sheila Gust	LC	IRR	1.33
2268-3	William Knutson	LC	IRR	2
2372-3	Larry Erickson	LC	IRR	1.76
3948-3	Jason Knutson	LC	IRR	1.88
5319-3	Larry Erickson	LC	IRR	1.89
5886-3	Tim Ostrem	LC	IRR	1.78
5899-3	Tim Ostrem	LC	IRR	1.78
5982-3	Leah Johnson	LC	IRR	1.64
6563-3	Rus Farms Real Estate LLC	LC	IRR	1.78
6565-3	Metabank	LC	IRR	1.78
6566-3	Metabank	LC	IRR	0.97
6569-3	David & Cathy Smit Revocable Trust	PE	IRR	1.11
6811A-3	Jesse & Tanya Vandestroet	PE	IRR	1.78
6812-3	Jesse & Tanya Vandestroet	LC	IRR	1.78
6813-3	Rus Farms Real Estate LLC	LC	IRR	1.78
6815A-3	Rus Farms Real Estate LLC	LC	IRR	1.78
6816-3	Farron & Michelle Pratt	LC	IRR	1.39
6818-3	Metabank	PE	IRR	1.55
6819-3	Metabank	LC	IRR	1.39
6820A-3	Jesse & Tanya Vandestroet	PE	IRR	1.56
6822-3	Hansen Properties	PE	IRR	1.11
7001-3	Rus Farms Real Estate LLC	LC	IRR	1.78
7002-3	Jesse & Tanya Vandestroet	LC	IRR	1.39
7003-3	Metabank	LC	IRR	0.67
7111-3	Kari Ostrem	LC	IRR	1.78
7150-3	Tim Ostrem	PE	IRR	1.78
7383-3	Metabank	PE	IRR	0.56
7384-3	Nicholas & Courtney Blake	PE	IRR	1.67
7441-3	Jason or Alicia Knutson	PE	IRR	1.78
7442-3	Leah Johnson	PE	IRR	0*
7693-3	Metabank	PE	IRR	0.67
7919-3	Larry & Marlene Erickson	PE	IRR	1.83
7994-3	Metabank	PE	IRR	0*
7995-3	Jesse & Tanya Vandestroet	PE	IRR	0*
LC: Licensed Water Permit; PE: Water Permit; IRR: Irrigation				
*Diversion rate accounted for under a different permit number				

In Clay County, the Upper Vermillion Missouri: South aquifer is primarily under confined conditions with some variation in depth to the top of the aquifer and saturated aquifer thickness (SDGS, 2021; Water Rights, 2021a, 2021b and 2021c). The Upper Vermillion Missouri: South aquifer is expected to be confined near the well the applicant proposes to use based on the submitted well completion report and lithologic logs on file for nearby observation wells and water rights/permits (SDGS, 2021; Water Rights, 2021a, 2021b and 2021c). Drawdown created by pumping a well generally does not extend far from the pumped well in an unconfined aquifer; however, in a confined aquifer, drawdown from pumping could extend a distance from the diversion point. The exact drawdown behavior of a well cannot be known without an aquifer performance test. Observation well CL-66AR (approximately 1.3 miles east of the well the applicant proposes to use) has ten high-yield irrigation wells within approximately one mile of it (Water Rights, 2021a and 2021b). The drawdown from pumping can be seen on the hydrograph for CL-66AR in Figure 2, along with the aquifer returning to pre-pumping conditions between irrigation seasons (Water Rights, 2021a). The water levels in CL-66AR vary between confined and unconfined, but CL-66AR generally acts as an unconfined aquifer well. The lithologic log on file for CL-66AR noted the well was drilled 120 feet deep, has a casing stickup height of two feet, and the top of aquifer at 64 feet below the top of the well casing (SDGS, 2021). The lowest recorded static water level on the hydrograph is approximately 63 feet from the top of the well casing, which indicates there was still about a foot of artesian head pressure in CL-66AR even during drier periods when high-yield irrigation wells are expected to be pumping more water (Water Rights, 2021a).

Near the well the applicant proposes to use, the Upper Vermillion Missouri: South aquifer is expected have a saturated aquifer thickness ranging from approximately 50 to 100 feet and have the depth to the top of aquifer materials ranging from approximately 70 to 100 feet below the ground surface (SDGS, 2021; Water Rights, 2021c). This would allow for enough thickness for a pump to be placed 20 feet below the top of the aquifer, which is required for the well to be considered adequate under ARSD 74:02:04:20(6). Any drawdown as a result of the proposed diversion is not expected to unlawfully impair nearby adequate wells. In Clay and Turner Counties, there are no complaints on file with the DENR-Water Rights Program regarding well interference for adequate wells completed into the Upper Vermillion Missouri: South aquifer (Water Rights, 2021d).

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 Upper Vermillion Missouri: South 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 of the Upper Vermillion Missouri: South aquifer near the well the applicant proposes to use, and the lack of well interference complaints for adequate wells completed into the Upper Vermillion Missouri: South aquifer in Clay and Turner Counties, any drawdown created from the proposed diversion is not expected to cause an unlawful impairment on existing water right/permit holders or domestic users with adequate wells. Additionally, the well the applicant proposes to use is an existing well that has been in place and is presumed to have been in use for some time without any reported well interference complaints on file with the DENR-Water Rights Program (Water Rights, 2021b and 2021d). 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. 8492-3 proposes to irrigate 180 acres from an existing well authorized under Water Right No. 7111-3. The applicant holds Water Right No. 7111-3 which authorizes a maximum instantaneous diversion rate of 1.78 cfs from one well completed into the Upper Vermillion Missouri: South aquifer (156 feet deep) to irrigate 130 acres.
2. If approved, Water Permit Application No. 8492-3 and Water Right No. 7111-3 will collectively authorize a maximum instantaneous diversion rate of 1.78 cfs for the irrigation of 310 acres. The site of interest is located in Clay County approximately six miles southwest of Centerville, South Dakota.
3. Water Right No. 7111-3 was labeled as withdrawing from the Lower Vermillion Missouri aquifer; however, investigations completed since approval of the water right have determined the well authorized under Water Right No. 7111-3 is completed into the Upper Vermillion Missouri: South aquifer.
4. Based on Buhler's (2014) Flow Net Analysis and the observation well data, there is a reasonable probability that unappropriated water is available from the Upper Vermillion Missouri: South aquifer to supply the proposed appropriation.
5. There is a reasonable probability that the proposed diversion by Water Permit Application No. 8492-3 will not unlawfully impair adequate wells for existing water right/permit holders and domestic users.

Nakaila Steen

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

Reviewed by:

Adam Mathiowetz

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

References

Buhler, K.A., 2014. Report to the Chief Engineer on 21 Water Permit Applications from the Upper Vermillion Missouri Aquifer. SD DENR – Water Rights Program, Joe Foss Bldg., Pierre, SD.

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- Water Rights, 2021a. Observation Well Data, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2021b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2021c. Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2021d. County Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, April 14, 2021 8:24 AM
To: Kari Ostrem (tkostrem@gmail.com)
Subject: Water Permit Application No. 8492-3
Attachments: 1050.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
Water Rights Program
(605) 773-3352



AFFIDAVIT OF PUBLICATION

PLAIN TALK

RECEIVED
APR 26 2021
WATER RIGHTS
PROGRAM

TIM OR KARI OSTREM
45924 300 STREET
CENTERVILLE SD 57014

STATE OF SOUTH DAKOTA
COUNTY OF CLAY

JACKIE LAMMERS, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE CLASSIFIED MANAGER 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 23rd DAY OF April, 2021.
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$26.19 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: 04/23/2021

FILED ON: 04/23/2021



SUBSCRIBED AND SWORN TO BEFORE ME THIS 23rd DAY OF April, 2021



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

I, JACKIE LAMMERS, DO HEREBY CERTIFY THAT THE ABOVE
IS A TRUE AND CORRECT COPY OF THE ORIGINAL
AND THAT THE SAME IS A TRUE AND CORRECT COPY OF THE ORIGINAL

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

Ad text : NOTICE OF APPLICATION NO. 8492-3 to Appropriate Water

Notice is given that Tim or Kari Ostrem, 45924 300 St, Centerville SD 57014 have filed an application for a water permit to irrigate 180 new acres. Water Right No. 7111-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Upper Vermillion Missouri:South Aquifer (156 feet deep) located in the approximate center of the SE 1/4 Section 17 to irrigate 130 acres located in the SE 1/4 Section 17; all in T95N-R52W. This application proposes to irrigate 180 new acres located in the E 1/2 SE 1/4 and the SW 1/4 Section 17--T95N-R52W from the existing well. This application, if approved, and Water Right No. 7111-3 will authorize a total diversion of 1.78 cfs for irrigation of 310 acres. This site is located approximately 6 miles southwest of Centerville SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8492-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineers recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352) and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 3, 2021.

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

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

Published once at the total approximate cost of \$26.19.

Published April 23, 2021.

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED

APR 26 2021

WATER RIGHTS
PROGRAM

TIM OR KARI OSTREM
45924 300TH ST
CENTERVILLE SD 57014

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
4+23 NOTICE OF APPLICATIO

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 23rd DAY OF April, 2021
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$26.63 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: 04/23/2021

FILED ON: 04/23/2021

SUBSCRIBED AND SWORN TO BEFORE ME THIS 23rd DAY OF April, 2021


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

Ad text : 4 + 23

NOTICE OF APPLICATION NO. 8492-3 to Appropriate Water

Notice is given that Tim or Kari Ostrem, 45924 300 St, Centerville SD 57014 have filed an application for a water permit to irrigate 180 new acres. Water Right No. 7111-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Upper Vermillion Missouri:South Aquifer (156 feet deep) located in the approximate center of the SE 1/4 Section 17 to irrigate 130 acres located in the SE 1/4 Section 17; all in T95N-R52W. This application proposes to irrigate 180 new acres located in the E 1/2 SE 1/4 and the SW 1/4 Section 17- T95N-R52W from the existing well. This application, if approved, and Water Right No. 7111-3 will authorize a total diversion of 1.78 cfs for irrigation of 310 acres. This site is located approximately 6 miles southwest of Centerville SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8492-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineers recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352) and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 3, 2021.

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

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

Published once at the total approximate cost of \$26.63

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, April 14, 2021 8:19 AM
To: 'classifieds@plaintalk.net'
Subject: 8492-3, Tim or Kari Ostrem
Attachments: 8492-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 23, 2021.

Tim or Kari Ostrem, 45924 300 St, Centerville SD 57014 (605 530-1505) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

Water Rights Program
(605) 773-3352



Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, April 14, 2021 8:19 AM
To: Jackie Lammers (jackie.lammers@yankton.net)
Subject: 8492-3, Tim or Kari Ostrem
Attachments: 8492-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 23, 2021.

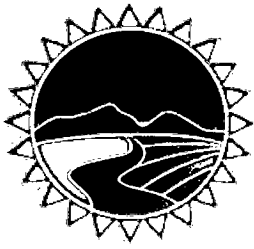
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Let me know if you have questions. Please acknowledge receipt of this email.

Karen Schlaak
Water Rights Program
(605) 773-3352





DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

April 14, 2021

Tim or Kari Ostrem
45924 300 St
Centerville SD 57014

Dear Mr. & Mrs. Ostrem:

Water Permit Application No. 8492-3 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 at Vermillion SD (Ph # 605 624-2695) and the Press & Dakotan printed at 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,

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. 8492-3 to Appropriate Water

Notice is given that Tim or Kari Ostrem, 45924 300 St, Centerville SD 57014 have filed an application for a water permit to irrigate 180 new acres. Water Right No. 7111-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Upper Vermillion Missouri:South Aquifer (156 feet deep) located in the approximate center of the SE 1/4 Section 17 to irrigate 130 acres located in the SE 1/4 Section 17; all in T95N-R52W. This application proposes to irrigate 180 new acres located in the E 1/2 SE 1/4 and the SW 1/4 Section 17- T95N-R52W from the existing well. This application, if approved, and Water Right No. 7111-3 will authorize a total diversion of 1.78 cfs for irrigation of 310 acres. This site is located approximately 6 miles southwest of Centerville SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8492-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 3, 2021.

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

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

Published once at the total approximate cost of__



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

MAY 17 2021

Tim or Kari Ostrem
45924 300th St
Centerville SD 57014

Dear Mr. & Mrs. Ostrem:

Enclosed is Water Permit No. 8492-3 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

8492-3

Form 10

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

Date 6-6-2024

MAIL TO: PMB 2020

DANR - Water Rights Program
523 E. Capitol Ave
Pierre, SD 57501-3182

Phone: (605) 773-3352

FROM: Tim or Kari Ostrem
(name)45924 300th St.
(address)

<u>Centerville</u>	<u>SD</u>	<u>57014</u>	<u>605-530-1505</u>
(city)	(state)	(zip)	(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.

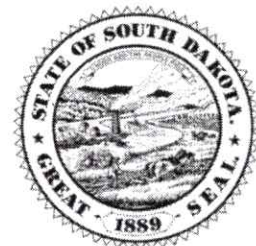
Water Permit No. 8492-3 states that the water use system is to be constructed by May 3, 2026, and water is to be put to beneficial use by May 3, 2030.
(date) (date)

The water use system was completed on 12-2022.
(date)

Applying the water to beneficial use was completed on 4-2023.
(date)

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

Tim Ostrem
(signature)



RECEIVED

JUN 10 2024

OFFICE OF
WATER

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8492-3

I have this day, June 5, 2024, made a thorough examination of the water use system owned by Tim or Kari Ostrem, 45924 300 Street, Centerville, SD 57014, holders of Permit No. 8492-3, bearing the priority date of February 19, 2021, authorizing the irrigation of 180 new acres. Water Right No. 7111-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Upper Vermillion Missouri:South Aquifer (156 feet deep) located in the approximate center of the SE1/4 of Section 17 in T95N-R52W. Permit No. 8492-3 authorizes irrigation of 180 new acres located in the E1/2 of the SE1/4 and the SW1/4 of Section 17 in T95N-R52W from the existing well. This permit and Water Right No. 7111-3 will authorize a total diversion of 1.78 cfs for irrigation of 310 acres located in Clay County.

Inspection contact: Tim Ostrem

A. Works used to divert the water:

Well Information (from Water Right No. 7111-3)

- 1) Well Drilling Firm: Hammond Wetmore Drilling
- 2) No. of Wells: 1
- 3) Depth(s): 156 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 16 inches
- 2) Length: 106 feet
- 3) Type: Plastic
- 4)

Screen:

- 1) Diameter: 16 inches
- 2) Length: 50 feet
- 3) Type: PVC
- 4) Static water level: 82 feet

Pump:

- 1) Make: Unknown
- 2) Model: Unknown
- 3) Capacity: 800 GPM

Motor:

- 1) Make: Unknown
- 2) Model No.: Unknown
- 3) Horsepower rating: 50 hp

C. Works used to apply water to beneficial use:

Center Pivot:

- 1) Make: Zimmatic
- 2) Overall length: 1,300 feet
- 3) Number of towers: 7
- 4) End gun: Yes, Range 108 feet
- 5) Capacity: 817 GPM

Chemigation Equipment:

- 1) Does chemigate: No

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

- 1) Type: PVC Size: 8 inches Length: 2,770 feet

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: Yes
- 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 1,300 feet north and 1,300 feet west of the southeast corner of Section 17-T95N-R52W (Latitude 43.04325, Longitude -97.00817 – approximate center of the SE1/4).
- 2) The works are capable of diverting and conveying to the places of use 1.78 cu. ft. per second of water from the well which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows: All in

<u>Section 17-T95N-R52W</u>	
<u>NW1/4SW1/4</u>	<u>29 acres</u>
<u>NE1/4SW1/4</u>	<u>32 acres</u>
<u>SE1/4SW1/4</u>	<u>28 acres</u>
<u>SW1/4SW1/4</u>	<u>1 acre</u>
<u>NE1/4SE1/4</u>	<u>35 acres</u>
<u>SE1/4SE1/4</u>	<u>35 acres</u>
<u>SW 1/4SE1/4</u>	<u>35 acres</u>
<u>NW1/4SE1/4</u>	<u>35 acres</u>

comprising a total of 230 acres of land and the license should be issued for 1.78 cfs.

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

F. Comments or other permit(s) associated with the project: This permit adds acres to the previously irrigated acres authorized by Water Right No. 7111-3. A former farm site in the SE1/4 of Section 17 was cleared so that the existing pivot can now make a full circle. A second pivot was added in the SW1/4 of Section 17. The two systems should be combined into one license, and they would like the license to be in the names of Tim or Kari Ostrem.

Keith DeJong

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

Date report completed: June 6, 2024

Sec 7
T95N-R52W

Sec 8
T95N-R52W

Sec 9
T95N-R52W

Sec 16
T95N-R52W

Sec 18
T95N-R52W

Sec 19
T95N-R52W

Sec 20
T95N-R52W

Sec 21
T95N-R52W

Center of Sec. 17
T95N-R52W

2,770 Feet of 8" PVC Underground Piping

Well Coordinates
Lat: 43.04325
Long: -97.00817

Well Location
From the SE corner of Sec
17 T95N-R52W

1,300 Ft. North
1,300 Ft. West

Water Right No. 7111-3

Water Permit No. 8492-3

Water Permit No. 8492-3

NW SW
29 acres

NE SW
32 acres

NW SE
35 acres

NE SE
35 acres

SW SW
1 acre

SE SW
28 acres

SW SE
35 acres

SE SE
35 acres

TOTAL: 230 acres



Keith DeJong
Keith DeJong, PE Ret.
Staff Engineer
June 6, 2024



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 17 2024

8492-3
7111-3

Tim or Kari Ostrem
45924 300th St
Centerville SD 57014

Dear Mr. & Ms. Ostrem:

Enclosed is Water License No. 8492-3. 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.

So 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

NOTE: The applicable portions of Water Right No. 7111-3 have been incorporated into Water Right No. 8492-3.

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8492-3**

(1) Water Right No. 7111-3, held by Kari Ostrem, authorizes the diversion of 1.78 cubic feet of water per second (cfs) from groundwater, one well, for the irrigation of 130 acres.

Tim or Kari Ostrem, 45924 300th Street, Centerville SD 57014, made Application No. 8492-3, February 19, 2021, for a water permit to add an additional 180 irrigated acres, with no increase in diversion, to what was already authorized by Water Right No. 7111-3. Permit No. 8492-3, with a priority date of February 19, 2021, was approved May 3, 2021, and issued to the applicants for diversion of water with construction of the described water supply system to be completed on or before May 3, 2026, and for the application to beneficial use of water on or before May 3, 2030.

The applicants submitted a "Notice of Completion of Works" indicating that the water use system was completed in December 2022, and water was put to beneficial use in April 2023.

The applicable portions of Water Right No. 7111-3 have been incorporated into this license.

(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 are entitled to divert 1.78 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,300 ft N & 1,300 ft W of the SE corner Section 17, T95N, R52W (approx. center SE $\frac{1}{4}$)
(Latitude 43.04325 & Longitude -97.00817)

(3) The amount of 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.

(4) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate to following land:

Section 17, T95N, R52W, Clay County			
NE $\frac{1}{4}$ SW $\frac{1}{4}$	32 acres	NE $\frac{1}{4}$ SE $\frac{1}{4}$	35 acres
NW $\frac{1}{4}$ SW $\frac{1}{4}$	29 acres	NW $\frac{1}{4}$ SE $\frac{1}{4}$	35 acres
SW $\frac{1}{4}$ SW $\frac{1}{4}$	1 acre	SW $\frac{1}{4}$ SE $\frac{1}{4}$	35 acres
SE $\frac{1}{4}$ SW $\frac{1}{4}$	28 acres	SE $\frac{1}{4}$ SE $\frac{1}{4}$	35 acres
TOTAL: 230 acres			

(5) Pursuant to South Dakota Water Law 46-5-30.1 Tim or Kari Ostrem, the holders and/or owners of Water Right No. 8492-3 are issued a license to appropriate water, the right to use 1.78 cubic feet of water per second from groundwater, one well (Upper Vermillion Missouri: South Aquifer), with priority dates of March 18, 2009, for 1.78 cfs & 130 acres, and February 19, 2021, for 100 acres, 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. 8492-3 and subject to the following qualifications:

continued

Qualifications

1. The well approved under Water Permit No. 8492-3 & Water Right No. 7111-3 is located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit & Water Right No. 7111-3 shall control their withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit No. 8492-3 and Water Right No. 7111-3 authorize a combined diversion rate of 1.78 cfs for the irrigation of 310 acres. *(The applicable portions of Water Right No. 7111-3 have been incorporated into Water Right No. 8492-3. All diversion authority is now held under Water Right No. 8492-3. Additionally, the number of irrigated acres has been reduced to 230, based on the system as developed.)*
3. 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

JUN 17 2024
date

