

WATER PERMIT NO. 8488-3

Name of Applicant: Brett Petersen

Address: 45656 Hwy 18, Hurley SD 57036

Phone: 605 351-6026

Amount of Water Claimed: 1.78 cfs

Total Acres: 80

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Turner

Type of Waste Disposal System:

Location: 3 miles southwest of Hurley

PRIORITY

Date Received: 2-8-21

Application/License Fee: \$ 950

Corrected Application Received:

Period of Annual Use: June 1 – Sept 30

Remarks: Requesting diversion rate greater than statutory limit

Diversion Point: S 1/2 NE 1/4 Sec 7-T97N-R53W

Land to be Irrigated: S 1/2 NE 1/4 Sec 7-T97N-
R53W

Depth of Well: 205

Well Driller:

Remarks:

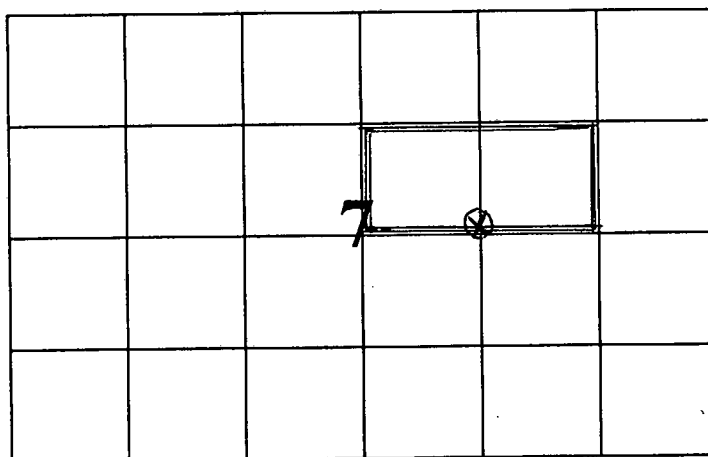
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 2-8-21

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA
WATER PERMIT NO. 8488-3

Date of first receipt of application February 8, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8488-3 to Brett Petersen, 45656 US Hwy 18, Hurley SD 57036 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. 8488-3 appropriates 1.78 cubic feet of water per second (cfs) from one well to be completed into the Upper Vermillion Missouri West Aquifer (approximately 205 feet deep) located in the S 1/2 NE 1/4 Section 7 for irrigation of 80 acres located in the S 1/2 NE 1/4 Section 7; all in T97N-R53W This site is located approximately 4 miles southwest of Hurley 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: June 1 – September 30.
3. The date from which applicant may claim right is February 8, 2021.
4. The date of approval of Permit No. 8488-3 is May 10, 2021.
5. One-fifth of the construction is to be completed on or before November 10, 2023.
6. All construction is to be completed on or before May 10, 2026.
7. Water is to be put to beneficial use on or before May 10, 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. 8488-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8488-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8488-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 80 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. 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

JUN 17 2021

date



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

RECEIVED

FEB 08 2021

PAID

FEB 8 2021

Ck# 3139

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8488-3</u>	(office use only) Hydrologic Unit <u>10170102</u>	WATER RIGHTS PROGRAM
	Basin <u>Vermillion River</u>		
	Newspaper <u>Viborg Enterprise</u>		
	<u>Argus Leader</u>		

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 Brett Petersen

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

Mailing Address 45656 US Hwy 18 Hurley ☒ SD ☒ 57036
(Address) (City) (State) (Zip Code)

Phone 6053516026 Mobile 6053516026 Email brettpetersen@gmail.com

2. Amount of water claimed 1,78 *CFS or 800 **GPM ***AF Total Acreage 80
(*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- Upper Vermillion Aquifer

4. Location of point of diversion 1 Well in the S 1/2 of NE 1/4 7-T97N-R53W

(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Turner ☒

5. County or counties where water will be used Turner

6. Annual period during which water is to be used June-September

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
E1/2 of S1/2 of NE 1/4 7-T97N-R53W	40	W1/2 of S1/2 of NE 1/4 7-T97N-R53W	40

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

Drill a new irrigation well on the south end of property at the location of the center pivot to irrigate 80 acres. I need 800 GPM to be able to windshield wipe the pivot.

Requesting diversion rate greater than statutory limit.

I, [Signature] Owner, the applicant, certify under
Name of Person Title (if applicable)

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

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 1 Have test holes been drilled ☒ Yes ☐ No Drilled by SDGS UVM Study
(if yes, please provide copies of logs)

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

For either Existing or Proposed Wells:

c) Well Depth (required) 205 Depth to Top of Water Bearing Material 150 Depth to Water from Surface

d) Distance to nearest domestic well on applicant's property 3000 Ft Property owned by others No

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)

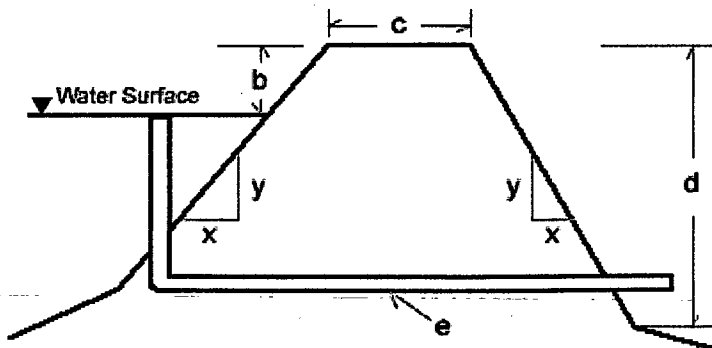
Upstream

Downstream

h) Surface Area of Impoundment

i) Storage Acre Feet

j) Drainage Area Above Dam Acres



Record 155 of 825**Location Information**

Legal Location: SE NE NE NE SEC. 07, T. 097 N., R. 53 W.
County: TURNER Location: 097N53W07AAAD
Latitude: 43.241083
Hydrologic Unit Code: 10170102 Longitude: - 97.140753
Land Owner: Ground Surface Elev. (ft.): 1272.33 I

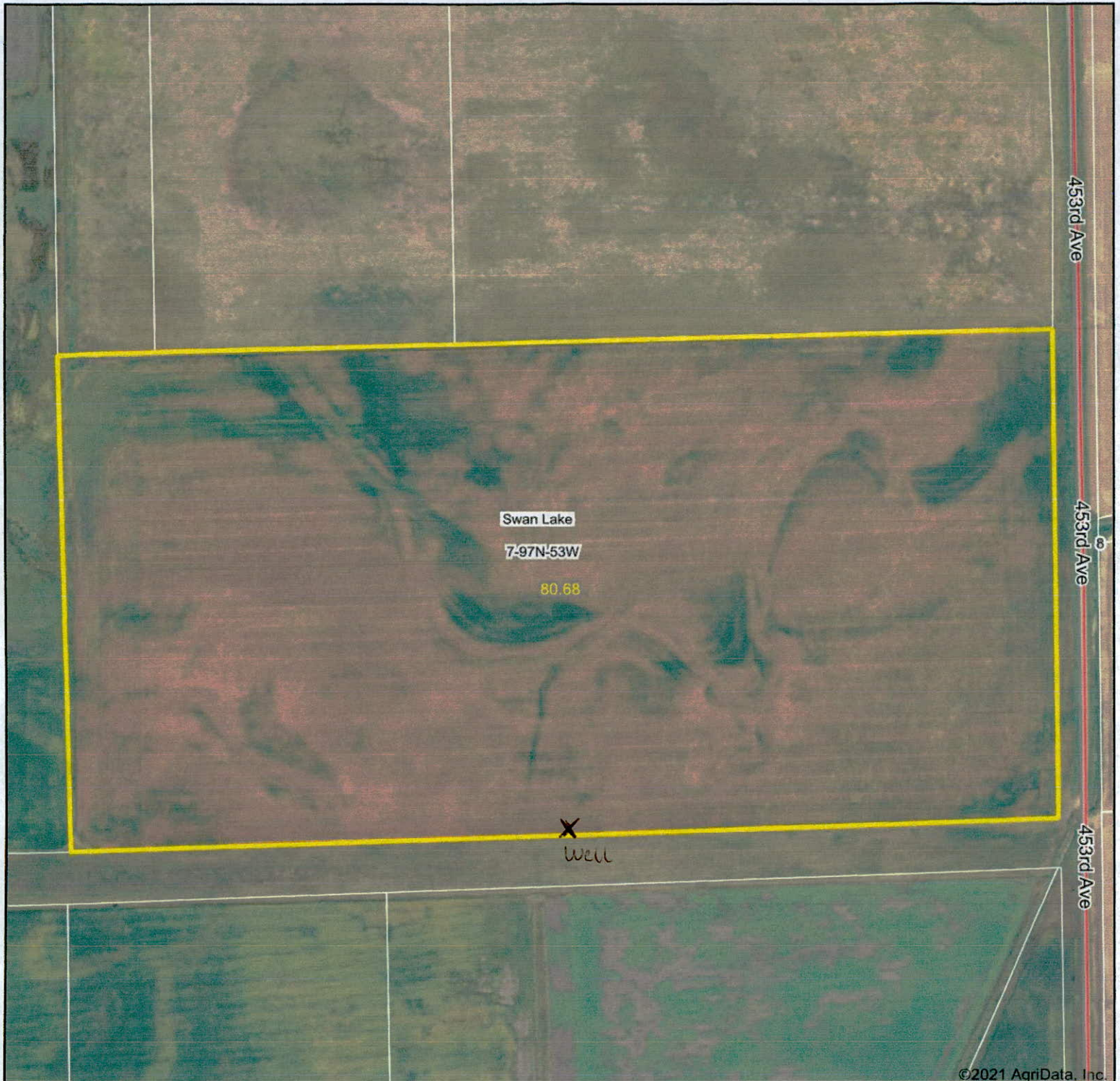
Test Hole Information

Project: UVM AQUIFER STUDY
Drill Date: 08/26/2013 Geologist: J. ALLEN
Company: SDGS Geologist's Log: X
Drilling Method: ROTARY Driller: S. JENSEN
Test Hole Number: M51-2013-36 Driller's Log:
Geophysical NO Total Drill Hole Depth (ft.): 222.5
Log:

Lithologic Information

<u>Elevation (ft.)</u>	<u>Depth (ft.)</u>	<u>Description</u>
1272.3 - 1270.3	0.0 - 2.0	TOPSOIL, BLACK
1270.3 - 1252.3	2.0 - 20.0	CLAY AND SILT, LIGHT-BROWN; OXIDIZED, WITH PEBBLES
1252.3 - 1201.3	20.0 - 71.0	CLAY, GRAY, SILTY, SANDY, PEBBLY; UNOXIDIZED, CHALK PIECES, SAND AND GRAVEL STRINGER 48 TO 50 FEET, ROCKS AT 50 AND 57 FEET
1201.3 - 1142.3	71.0 - 130.0	CLAY, GRAY, SILTY, SANDY; UNOXIDIZED, SOFT, WITH SOME MEDIUM GRAVEL TO FINE SAND
1142.3 - 1122.3	130.0 - 150.0	CLAY AND SILT, GRAY, SANDY; UNOXIDIZED, SMALL AMOUNTS OF GRAVEL
1122.3 - 1049.8	150.0 - 222.5	SAND AND GRAVEL, FINE SAND TO MEDIUM GRAVEL, ANGULAR TO SUBANGULAR, POORLY SORTED; UNOXIDIZED, WITH SOME CLAY AND CHALK

Aerial Map



Map Center: 43° 14' 14.56, -97° 8' 45.01

0ft 418ft 836ft

7-97N-53W
Turner County
South Dakota



1/21/2021

Maps Provided By:



© AgriData, Inc. 2021 www.AgriDataInc.com

Field borders provided by Farm Service Agency as of 5/21/2008.

97N 54W
Section: 01

97N 53W
Section: 06

97N 53W
Section: 05

97N 54W
Section: 12

97N 53W
Section: 07

97N 53W
Section: 08

97N 54W
Section: 13

97N 53W
Section: 18

97N 53W
Section: 17

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date February 8, 2021

RECEIVED OF PBP Farms Partnership/Brett Petersen 45610 282nd St Hurley SD 57036

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

Fee for Application for Permit No. <u>8488-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$750.00
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>8488-3</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	\$950.00

By Eric Gronlund
Chief Engineer
Em



**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. 8488-3, Brett Petersen**

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. 8488-3, Brett Petersen, 45656 US Hwy 18, Hurley SD 57036.

The Chief Engineer is recommending APPROVAL of Application No. 8488-3 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. 8488-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8488-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8488-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 80 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. 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
April 21, 2021

**Report to the Chief Engineer on
Water Permit Application No. 8488-3**

Brett Petersen
31 March 2021

Water Permit Application No. 8488-3 seeks to appropriate 1.78 cubic feet of water per second (cfs) from one well (approximately 205 feet deep) located in the S ½ NE ¼ Section 7 for irrigation of 80 acres located in the S ½ NE ¼ Section 7; all in T97N-R53W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 4 miles southwest of Hurley, South Dakota.

Aquifer: Upper Vermillion-Missouri: West (UVM:W)

Hydrogeologic characteristics

The Upper Vermillion-Missouri aquifer is composed of buried sand and gravel outwash that was deposited in a north-south bedrock channel during the Quaternary geological period [1]. The West management unit of the Upper Vermillion-Missouri aquifer lies in a bedrock channel extending northwest from the South management unit of the Upper Vermillion-Missouri aquifer [2]. The aquifer management unit is generally under confined conditions. Groundwater flow within the Upper Vermillion-Missouri aquifer is generally to the southeast [2].

The applicant submitted a test hole drilled for the Geological Survey Program on 26 August 2013 that is located approximately 0.4 miles northeast of the proposed well. The geologist reported poorly sorted sand and gravel from 150.0 to 222.5 feet below grade, or from 1,122.3 to 1,049.8 feet above the vertical datum. That layer of sand and gravel was overlain by 150 feet of clay, silt, pebbles, and other materials, with clay being the predominant material. The aquifer materials encountered from 150.0 to 225.5 feet below grade are typical of aquifer materials encountered in the Upper Vermillion-Missouri: West aquifer management unit [3].

Applicable South Dakota Codified Law

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion 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 assess the availability of water and possibility of developing this application without unlawful impairment of existing rights only.

Pursuant to SDCL 46-6-3.1, 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 the water to the groundwater source. An exception allows water distribution systems to withdraw from groundwater sources older or stratigraphically lower than the Greenhorn Formation regardless of the results of a hydrologic budget. The applicant is not a water distribution system as defined in SDCL 46-1-6(17), and the Upper Vermillion-Missouri:West aquifer management unit is not older and stratigraphically lower than the

Greenhorn Formation. Therefore, it is necessary to find that recharge exceeds withdrawals to approve this application.

Pursuant to SDCL 46-5-6 the amount of water diverted may not exceed 1 cfs per 70 acres irrigated, but also provides that the "Water Management Board may allow a greater diversion, in volume or rate or both, if the method of irrigation, any time constraints on diversion of water, or the type of soil so requires." The applicant is requesting to divert more than 1 cfs per 70 acres for this application. In his application, the applicant indicated the higher diversion rate is necessary because he will be operating a center pivot in a "windshield wipe" motion at the south end of the field. In the past, the Water Management Board has approved applications that request a higher diversion rate than the statutory limit for similar reasons.

Availability of Water

Hydrologic budget

Recharge

Recharge to the aquifer is from subsurface inflow from bedrock aquifers and infiltration from precipitation [2]. Buhler [2] used a flow-net analysis to estimate that groundwater outflow from the Upper Vermillion-Missouri: West aquifer management unit was approximately 2,681 acre-feet per year of water leaving the management unit via groundwater outflow in January of 2014. While this flow rate consists of one data point, it is the best available estimate of natural discharge, and therefore recharge, to the aquifer management unit.

Discharge

Discharge from the aquifer management unit is by subsurface outflow and withdrawals from domestic and appropriative wells [2]. Due to the relatively low withdrawal rate of domestic wells, the prevalence of rural water systems, and the presence of higher and therefore more easily accessible aquifer materials, domestic wells are a negligible portion of the hydrologic budget. There are six water permits advertised as belonging to the Upper Vermillion-Missouri: West aquifer management unit and four other active water rights/permits and seven inactive water rights/permits within the boundaries of the management unit that were advertised as belonging to the Upper Vermillion-Missouri aquifer but were not assigned a management unit when they were advertised [4]. Table 1 (see page 3) shows the water rights/permits considered in the hydrologic budget. Of the ten active water rights/permits in the boundaries of the management unit, two are for commercial use, one is for municipal use and is held by the City of Viborg, and the rest are for irrigation.

The City of Viborg purchases its water from another water distribution system, so they are unlikely to withdraw a significant amount of water from the aquifer [5]. Of the two commercial uses, Water Permit No. 8395-3 is limited to an annual withdrawal of 460 ac-ft/yr and the Water Right No. 6662-3 is limited to a maximum withdrawal rate of 0.134 cfs. While Water Permit No. 8395-3 is required to report their withdrawals, they have not fully developed their permit yet. Therefore, their withdrawal is assumed to fully develop the 460 ac-ft/yr they are permitted to withdraw. Water Right No. 6662-3 is assumed to pump at their maximum instantaneous withdrawal rate 60% of the time, for a total estimated withdrawal of approximately 58 ac-ft/yr.

Table 1: Water rights/permits considered in the hydrologic budget [4]

Permit No:	Status:	Name/Business:	Use Type	Priority:	Max. CFS	Acres Irrigated:
751-3	Incorporated License	City of Viborg	Municipal	12/13/1960	0.680	n/a
2041-3	License	City of Viborg	Municipal	12/13/1960	0.960	n/a
2506-3	License	James Reiners	Irrigation	10/23/1975	1.500	143
2507-3	Cancelled	Milo Hansen	Irrigation	11/03/1976	1.500	160
3944-3	Cancelled	James Reiners	Irrigation	01/03/1977	2.850	200
3945-3	Cancelled	James Reiners	Irrigation	01/03/1977	5.700	400
4105-3	Cancelled	Roger D. Peterson	Irrigation	04/15/1977	2.280	160
4265-3	License	James D. Bondsen	Irrigation	03/27/1978	0.730	51
4720-3	Cancelled	Arnold & Clara Wollman	Irrigation	04/02/1981	2.850	240
6054-3	Cancelled	James D. Bondsen	Irrigation	02/06/1998	1.430	100
6662-3	License	Vannorsdel's, Inc.	Commercial, Domestic	09/16/2008	0.134	n/a
7535-3	Permit	Donald Benson	Irrigation	11/30/2012	1.780	65
7588-3	Permit	Paul Petersen	Irrigation	12/26/2012	1.780	160
7602-3	Permit	Michael D Stevens	Irrigation	12/28/2012	1.890	132
7633-3	Permit	Smit Family Farms LLC	Irrigation	01/14/2013	1.780	152
7715-3	Permit	Allen Vannorsdel	Irrigation	02/25/2013	2.220	156
8395-3	Permit	Full Circle Dairy*	Commercial	03/11/2019	0.670	n/a
Lines highlighted in grey are inactive water rights/permits counted in historic irrigation withdrawals.						
*Annual withdrawal limit less than 100% of maximum instantaneous withdrawal						

Irrigation reported in the management unit is shown in Figure 1 (see page 4) [6] [7]. The average irrigation reported over the period of record (1979 – 2020) was 51.29 ac-ft/yr. Irrigation practices have changed over the period of record, so it may not be accurate to assume the average over the period of record will reflect future average withdrawals. The average irrigation reported over the last ten years of record (2011 – 2020) was 103.61 ac-ft/yr. Two irrigation permits, Water Permit Nos. 7535-3 and 7715-3, reported that their systems had not been constructed in 2020 [7], and may be subject to cancellation. Using the higher average and the estimated withdrawal for permits that have not developed their full use, the average withdrawal for irrigation is approximately 104 ac-ft/yr.

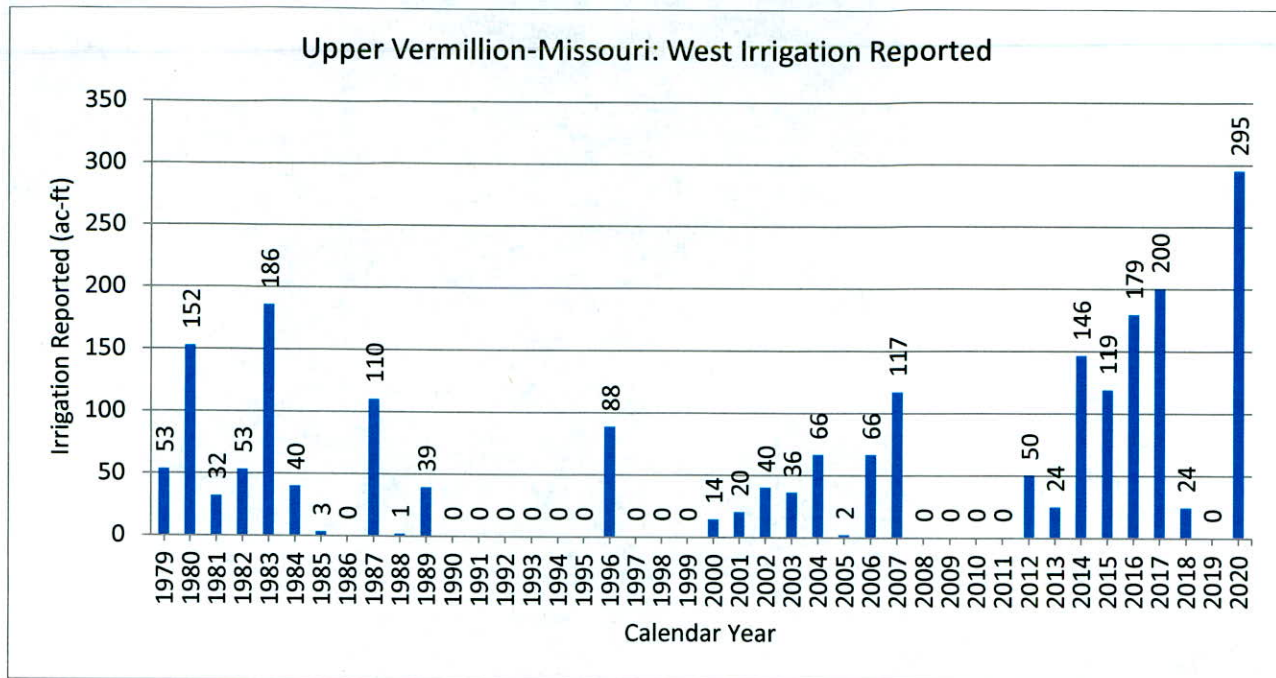


Figure 1: Irrigation reported in Upper Vermillion-Missouri: West aquifer management unit [6] [7]

Balance of hydrologic budget

The estimated recharge to the aquifer management unit is approximately 2,681 ac-ft/yr [2]. The estimated withdrawal for non-irrigation use is approximately 518 ac-ft/yr. The average withdrawal for irrigation use is 104 ac-ft/yr. This application may withdraw a maximum of 160 ac-ft/yr, but will likely withdraw less, on average. Therefore, based on the hydrologic budget, there is reasonable probability unappropriated water is available for this application.

Observation wells

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires that the Water Management Board rely upon the record of observation wells, in addition to other information, to determine the availability of unappropriated water. The Water Rights Program maintains two wells completed into the Upper Vermillion-Missouri: West aquifer management unit [8]. Figure 2 shows the water level elevations for those wells over the period of record. The nearest observation well to this application is Observation Well TU-77S, located approximately 2.6 miles northwest of the proposed well [8]. Observation Well TU-77T is located approximately 4.8 miles southeast of the proposed well [8]. Water levels in the management unit rise during periods of high precipitation and decline during periods of low precipitation [9]. There are also declines in the water levels due to seasonal pumping, but the water levels increase after seasonal pumping stops [8]. Since the water level elevations in the management unit are governed by precipitation trends and not pumping, that means there is natural discharge occurring in the aquifer which may be captured for pumping. Therefore, based on observation well analysis, there is reasonable probability unappropriated water is available for this application.

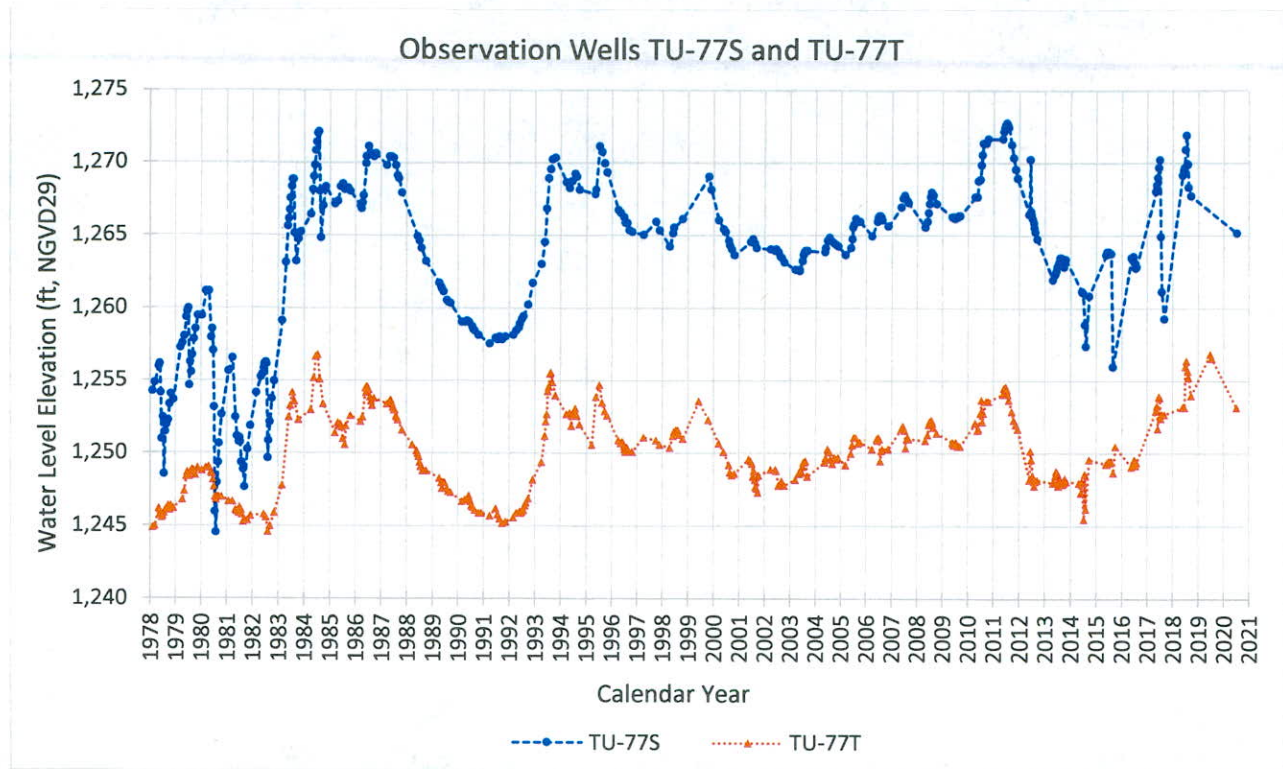


Figure 2: Observation Wells TU-77S and TU-77T [8]

Possibility of unlawful impairment to existing water rights

The Water Rights Program has historically interpreted an unlawful impairment of existing water rights to occur if a junior water right/permit causes a nearby adequate well with a senior water right/permit to become unable to withdraw at the rate it is entitled to or, if a domestic well is impacted, the junior water right/permit causes the adequate domestic well to be unable to withdraw at the rate needed to supply reasonable domestic use of water. Administrative Rule of South Dakota (ARSD) 74:02:04:20(6) defines an adequate well as:

...a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet

The nearest water right/permit in the Upper Vermillion-Missouri: West aquifer management unit is Water Permit No. 7633-3, located approximately 1.8 miles north of the proposed well for this application. The nearest domestic well on file with the Water Rights Program that is likely to be completed into the Upper Vermillion-Missouri: West aquifer management unit is located approximately 3.0 miles southeast of the proposed well for this application. Figure 3 shows water rights/permits near the proposed well for this application [4] [8].

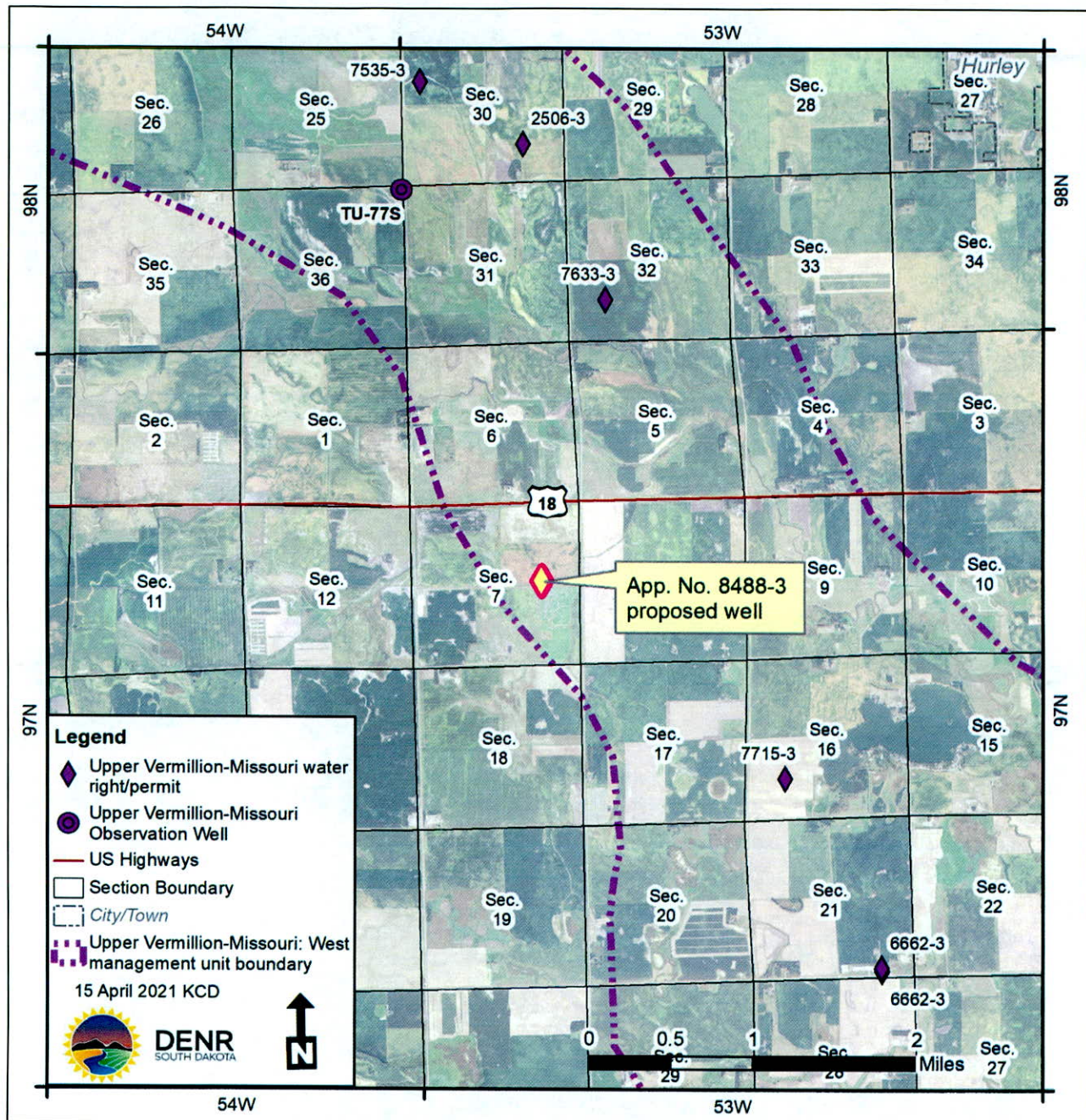


Figure 3: Water rights/permits near this application [4] [8] [2]

In 2013, residents of the Swan Lake community submitted a petition in opposition to some of the applications of concern in the Buhler [2] report because they believed the lake levels were connected to the levels of the aquifer [10]. There has not been another complaint about groundwater impacts on Swan Lake since those applications were developed. There are no well interference complaints on file with the Water Rights Program in the Upper Vermillion-Missouri: West aquifer management unit [11]. The Upper Vermillion-Missouri aquifer has historically had between 67 and 150 feet of hydraulic head above the level of the West aquifer management unit, plus approximately 40 feet of saturated thickness. This application is near the edge of the aquifer, drawdown due to this application may extend over a larger area than for a

water right/permit near the center of the aquifer. Due to the lack of complaints in the aquifer and other factors mentioned above, there is reasonable probability this application can be developed without unlawful impairment of existing water rights/permits.

Conclusions

1. Water Permit Application No. 8488-3 seeks to appropriate 1.78 cubic feet of water per second from one well located in the S $\frac{1}{2}$ NE $\frac{1}{4}$ Section 7 for irrigation of 80 acres located in the S $\frac{1}{2}$ NE $\frac{1}{4}$ Section 7; all in T97N-R53W.
2. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres, but the Water Management Board has approved applications that request a higher diversion rate than the statutory limit for reasons similar to the one given by the applicant before.
3. Based on the hydrologic budget and observation well analysis, there is reasonable probability unappropriated water is available for this application.
4. There is reasonable probability this application can be developed without unlawful impairment of existing rights.



Kimberly C. Drennon, E.I.
Natural Resources Engineer II, Water Rights Program

References

- [1] S. L. Holmes and D. Filipovic, "Hydrogeologic investigation of the Upper-Vermillion-Missouri aquifer," SD DENR Geological Survey Program, Vermillion, South Dakota, 2015.
- [2] K. A. Buhler, "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, South Dakota, 2014.
- [3] SD Geological Survey, "Lithologic logs," Vermillion, South Dakota, 2020.
- [4] SD Water Rights, "Water right/permit files," Pierre, South Dakota, 2021.
- [5] K. C. Drennon, "Report to the Chief Engineer on Water Permit Application No. 8395-3," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2019.
- [6] SD Water Rights, "Irrigation summaries," SD DENR Water Rights Program, Joe Foss Bldg., Pierre, SD, 2020.
- [7] SD Water Rights, "Irrigation reports," SD DENR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2020.
- [8] SD Water Rights, "Observation wells," Pierre, South Dakota, 2021.
- [9] NOAA, "Climate at a Glance - Divisional Time Series for South Dakota Region 9," NOAA, 1 April 2021. [Online]. Available: <https://www.ncdc.noaa.gov/cag/divisional/time-series>. [Accessed 20 April 2021].
- [10] SD Water Management Board, "Findings of Facts, Conclusions of Law, and Final Decision on the Matter of Water Permit Application Nos. 7441-3 etc.," SD Water Rights, Joe Foss Bldg., Pierre, South Dakota, 2013.
- [11] SD Water Rights, "County Files," SD DENR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2021.

RECEIVED

MAY 24 2021

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA)

:SS
COUNTY OF TURNER)

Allyson M. Hill, being first duly sworn, on oath says the VIBORG ENTERPRISE is a WEEKLY newspaper published in VIBORG in said county of TURNER, State of South Dakota; and that she is authorized to and does make this affidavit on behalf of said VIBORG ENTERPRISE; that affiant has personal knowledge of all facts stated in this affidavit; that said newspaper is a legal newspaper as defined by SDCL 17-2-2.1 through 17-2-2.4 inclusive as amended, has a bona fide circulation of at least two hundred copies WEEKLY, has been published in the English language within said county and has been admitted to the United States mail under the second class mailing privilege, for at last one year continuously next prior to the publication of the notice herein mentioned and was and is printed wholly or in part in an office maintained at said place of publication; that said notice, a printed copy of which taken from the paper in which the same was published is hereto attached and is made part of this affidavit, was published in said newspaper

1 time(s) as follows: that the first publication of said

notice in said newspaper aforesaid was on Thursday

the 29 day of April, 2021,

and that the succeeding publications were severally

on Thursday, the ____ day of _____, 2021;

on Thursday, the ____ day of _____, 2021;

on Thursday, the ____ day of _____, 2021;

on Thursday, the ____ day of _____, 2021;

Affiant further says that the full amount of the fees charged for the publication of said notice inures to the benefit of the publishers of said newspaper; that no agreement of understanding for the division thereof has been made with any other person, that no part therefore has been agreed to be paid to any person whomsoever; and that the fees charged for the publication thereof are:

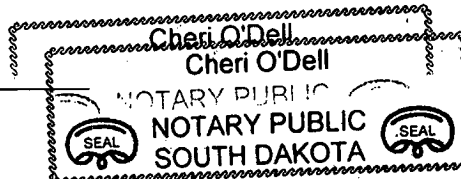
DOLLARS (\$ 23.32)

(X) Allyson M. Hill, Allyson M. Hill

Subscribed and sworn to before me this 3rd day of

May, 2021

Cheri O'Dell
Notary Public
My commission expires 03/12/2025



**NOTICE OF
APPLICATION
NO. 8488-3 to
Appropriate Water**

Notice is given that Brett Petersen, 45656 US Hwy 18, Hurley SD 57036 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Upper Vermillion Missouri West Aquifer (approximately 205 feet deep) located in the S 1/2 NE 1/4 Section 7 for irrigation of 80 acres located in the S 1/2 NE 1/4 Section 7; all in T97N-R53W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 4 miles southwest of Hurley SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8488-3 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 10, 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 \$23.32

Argus Leader

P.O. Box 677349, Dallas, TX 75267-7349

RECEIVED

MAY 11 2021

WATER RIGHTS
PROGRAM

Account No.: 6053516026

Ad No.: 0004701853

PO #: 8488-3 Petersen

Lines : 101

Ad Total: \$67.21

This is not an invoice

of Affidavits 1

BRETT PETERSEN
45656 US HWY 18
HURLEY, SD 57036

Account No.: 6053516026

Ad No.: 0004701853

Argus Leader AFFIDAVIT OF PUBLICATION

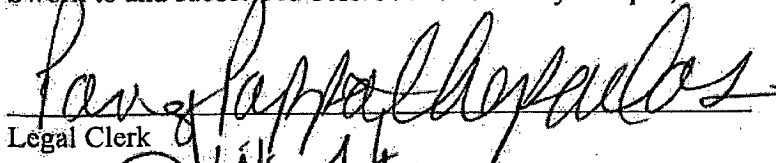
STATE OF SOUTH DAKOTA

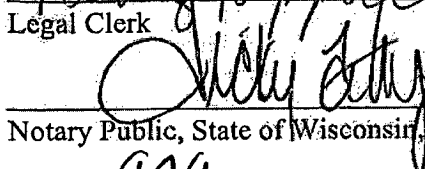
COUNTY OF MINNEHAHA

I being duly sworn, says: That The Argus Leader is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-21, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

Thursday, April 29, 2021

Sworn to and subscribed before me this 29 day of April, 2021.


Legal Clerk


Notary Public, State of Wisconsin, County of Brown

979.21
My Commission expires

VICKY FELTY
Notary Public
State of Wisconsin

NOTICE OF
APPLICATION NO. 8488-3
to Appropriate Water

Notice is given that Brett Petersen, 45656 US Hwy 18, Hurley SD 57036 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Upper Vermillion

Missouri West Aquifer (approximately 205 feet deep) located in the S 1/2 NE 1/4 Section 7 for irrigation of 80 acres located in the S 1/2 NE 1/4 Section 7; all in T97N-R53W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 4 miles southwest of Hurley SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8488-3 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 10, 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 \$67.21.
4701853 April 29, 2021

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, April 21, 2021 11:50 AM
To: 'legals@argusleader.com'
Subject: FW: 8488-3, Brett Petersen
Attachments: 8488-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 29, 2021.

Brett Petersen, 45656 US Hwy 18, Hurley SD 57036 (605 351-6026) 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
DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>



Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, April 21, 2021 11:49 AM
To: 'leader@iw.net'
Subject: 8488-3, Brett Petersen
Attachments: 8488-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 29, 2021 in the Viborg Enterprise.

Brett Petersen, 45656 US Hwy 18, Hurley SD 57036 (605 351-6026) 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
DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

April 21, 2021

Brett Petersen
45656 US Hwy 18
Hurley SD 57036

Dear Mr. Peterson:

Water Permit Application No. 8488-3 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 Viborg Enterprise printed at Centerville SD (Ph # 605 766-7827) and the Argus Leader printed at Sioux Falls SD (Ph # 605 331-2200). 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.

Instruction to Newspaper - Publish the Notice on April 29, 2021. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 8488-3 to Appropriate Water

Notice is given that Brett Petersen, 45656 US Hwy 18, Hurley SD 57036 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Upper Vermillion Missouri:West Aquifer (approximately 205 feet deep) located in the S 1/2 NE 1/4 Section 7 for irrigation of 80 acres located in the S 1/2 NE 1/4 Section 7; all in T97N-R53W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 4 miles southwest of Hurley SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8488-3 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 10, 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_

Schlaak, Karen

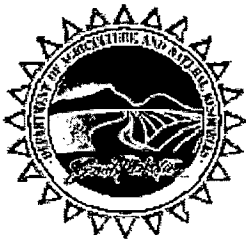
From: Schlaak, Karen
Sent: Wednesday, April 21, 2021 1:19 PM
To: brettptersen@gmail.com
Subject: Water Permit Application No. 8488-3
Attachments: 1090.pdf; OrderConf.pdf

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.

The second attachment should help you when contacting the Argus Leader.

Karen Schlaak

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





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 17 2021

Brett Petersen
45656 US Hwy 18
Hurley SD 57036

Dear Mr. Petersen:

Enclosed is Water Permit No. 8488-3 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

January 20, 2022

NOTICE

TO: BRETT PETERSEN, 45656 US HWY 18, HURLEY, SD 57036

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2021 Irrigation Questionnaires

Our records indicate your 2021 Irrigation Questionnaires have not been submitted. The request for the Questionnaires was dated October 22, 2021. The Water Management Board has directed that owners of water permits who have not submitted the 2021 Irrigation Questionnaires be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine if Permit No(s) 358-3 & 2365-3 should be amended to require the Questionnaire to be submitted each year and to determine action to be taken for violation of Water Permit No(s) 8488-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 2, 2022 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD, and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 8488-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Amend Permit No(s) 358-3 & 2365-3 to require the Irrigation Water Use Questionnaire to be submitted each year;
3. Postpone any action or take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaires are received in this office before the **March 2, 2022** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaires for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: VBYHEB**

Note: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

8488-3



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

January 31, 2022

Brett Petersen
45656 US Hwy 18
Hurley SD 57036

RE: Irrigation Questionnaires – Water Permit or Right Nos. 358-3, 2365-3 and 8488-3
Water Right No. 3246-3, Ralph Duxbury

Dear Mr. Petersen:

I am writing to acknowledge receipt of the 2021 irrigation questionnaires for the above listed permits/rights.

You may disregard the January 20, 2022, "Notice" concerning reporting requirements. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

Water Right No. 3246-3 is still listed in Ralph Duxbury's name, and I know that he passed away in 2018. The water right needs to be transferred to reflect current ownership. Please let me know who owns the land so I can contact them concerning filing of an ownership change.

If you have any questions, please contact me.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

Brett Petersen 12" Well Sec 7 Hurley SD formation Log

Formation	From	To
Top soil	0	3
Brown clay	3	7
Yellow clay	7	14
Gray clay sand mix	14	59
Sand/ gravel	59	67
Gray clay sand mix	67	104
Boulder	104	105
Sand/ Gravel	105	109
Gray Clay sand mix	109	115
Sand/ gravel	115	125
Med / fine sand	125	156
Sand w/ gray clay seams	156	165
Sand / gravel	165	185
Gray clay and gravel	185	

Brett Petersen Sec 7 Hurley SD

Legend

 Feature 1

18

286th St

186' Well  Brett Peterson 220' TH # 2

Brett Peterson TH # 1 260' Sec 7
N 43 14.1200  W 97 8.7630

 Brett Peterson TH # 3 260' Sec 7 Hurley 

 Sec 7

