

WATER PERMIT NO. 8465-3

Name of Applicant: **Robert Maeschen**

Address: **40568 266th St, Ethan SD 57334** Phone: **605 999 1170**

Amount of Water Claimed: **1.22 cfs** Total Acres: **91 acres**

Source of Water Supply: **groundwater (one well)**

Water to be used for: **irrigation** County: **Davison**

Type of Waste Disposal System:

Location: **5 miles west of Ethan**

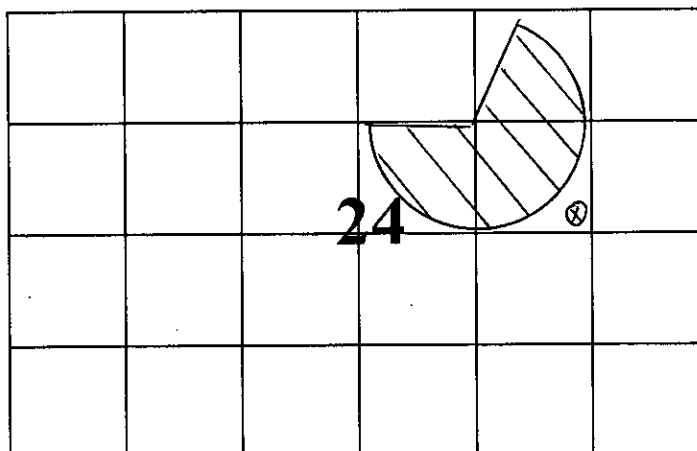
PRIORITY Date Received: **12-21-20** Application/License Fee: **\$ 950**

Corrected Application Received: Period of Annual Use: **June 1 – Sept 30**

Remarks:

Diversion Point: **SE 1/4 NE 1/4 Sec 24-T101N-
R61W**

Land to be Irrigated: **E 1/2 NE 1/4, SW 1/4 ^NNE 1/4
Sec 24-T101N-61W**



Depth of Well: **120 feet deep**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **12-21-20**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8465-3**

Date of first receipt of application December 21, 2020.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8465-3 to Robert Maeschen, 40568 266th St, Ethan SD 57334 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. 8465-3 appropriates 1.22 cubic feet of water per second from one well to be completed into the Niobrara Aquifer (approximately 129 feet deep) located in the SE 1/4 NE 1/4 Section 24 for irrigation of 91 acres located in the E 1/2 NE 1/4, SW 1/4 NE 1/4 Section 24; all in T101N-R61W. This site is located approximately five miles west of Ethan 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 December 21, 2020.
4. The date of approval of Permit No. 8465-3 is March 15, 2021.
5. One-fifth of the construction is to be completed on or before September 15, 2023.
6. All construction is to be completed on or before March 15, 2026.
7. Water is to be put to beneficial use on or before March 15, 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. 8465-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control 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. 8465-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

APR 06 2021

date



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

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8465-3</u> (office use only)
	Hydrologic Unit <u>10160011</u>
	Basin <u>James R</u>
	Newspaper <u>Daily Republic</u> <u>Press & Dakotan</u>

PAID
DEC 21 2020
Ck# 8292

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 Robert Maeschen

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

Mailing Address 40568 24th St. Ethan SD 57334
(Address) (City) (State) (Zip Code)

Phone _____ Mobile 605-999-1170 Email maescheninc@gmail.com

2. Amount of water claimed 1.22 *CFS or 550 **GPM _____ ***AF Total Acreage 91
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply well

4. Location of point of diversion 1 well in 101N 61W 24 NE 1/4 (SE 1/4 NE 1/4)
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
County Dawson

5. County or counties where water will be used Dawson County

6. Annual period during which water is to be used June 1 - September 30

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

Land Description	Acres	Land Description	Acres
<u>NE 1/4 101N 61W 24 SE</u>	<u>35</u>	<u>SE 1/4 NE 1/4</u>	
<u>NE 1/4 100N 61W 24 SW</u>	<u>35</u>	<u>SW 1/4 NE 1/4 Sec 24-T101N-R6W</u>	
<u>NE 1/4 100N 61W 24 NE</u>	<u>21</u>	<u>NE 1/4 NE 1/4</u>	

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

Proposed Irrigation Well

RECEIVED

DEC 21 2020

WATER RIGHTS
PROGRAM

I, Robert Maeschen 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 Stretch's Well Service
(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:

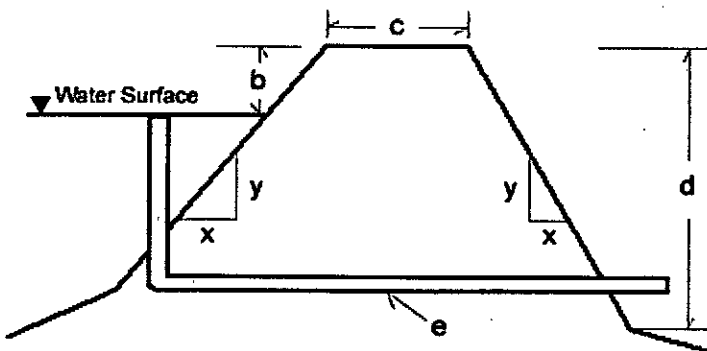
c) Well Depth (required) 120' Depth to Top of Water Bearing Material Depth to Water from Surface 37'd) Distance to nearest domestic well on applicant's property Property owned by others **2. Wastewater Disposal System Information**a) Type of System (i.e. septic tank, drain field) b) System Capacity (gallons) 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.

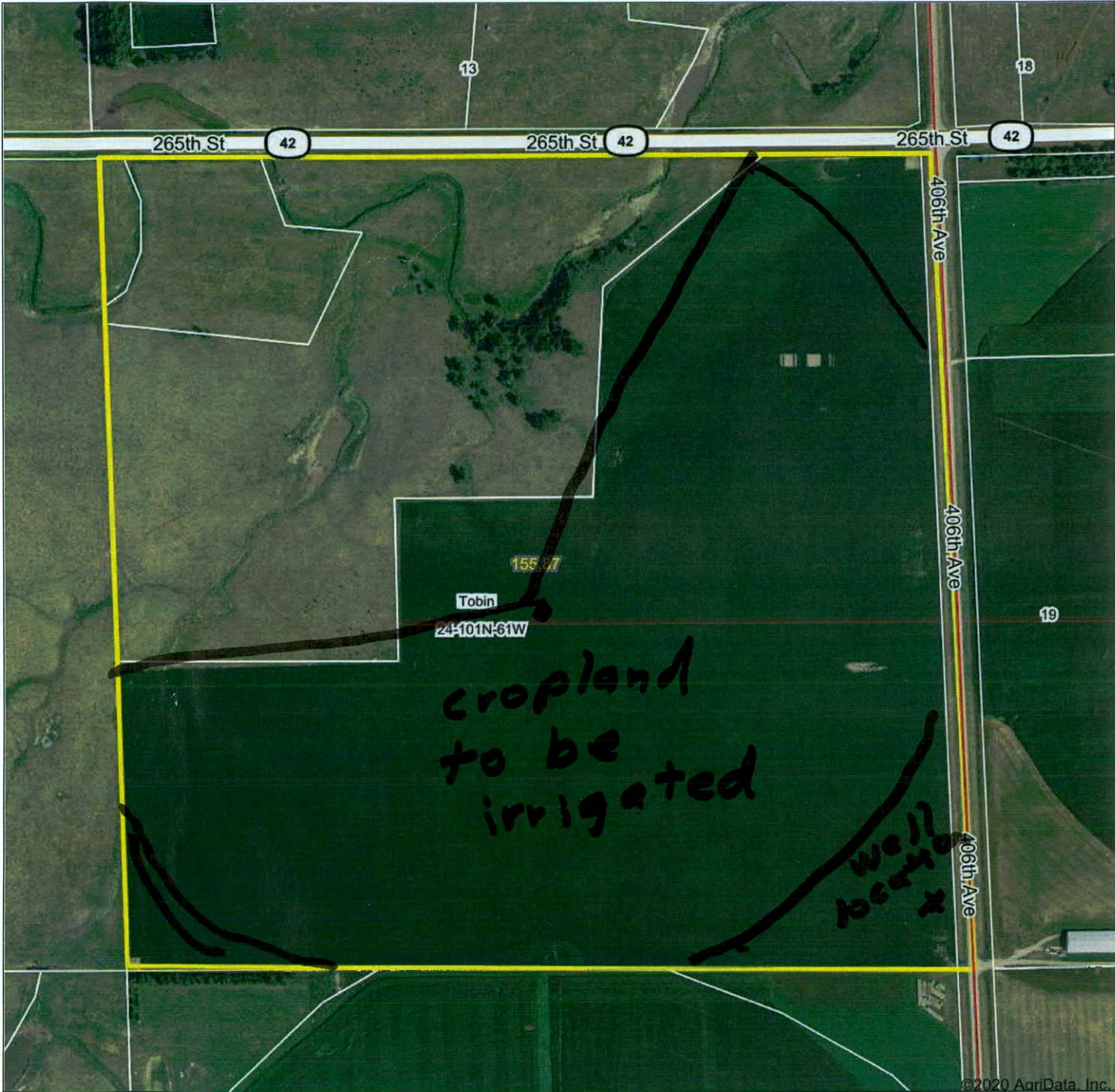
a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

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 Feetj) Drainage Area Above Dam Acres

Aerial Map



Owner
Robert Maeschen

Map Center: 43° 32' 18.82, -98° 5' 20.42

0ft 497ft 994ft

24-101N-61W
Davison County
South Dakota

Maps Provided By:
 **surety**
CUSTOMIZED ONLINE MAPPING
© AgriData, Inc. 2020 www.AgriDataInc.com



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

An aerial photograph of a rural landscape, divided into a 3x3 grid of sections. The sections are labeled with their respective township, range, and section numbers. The land is primarily agricultural, with various shades of green, brown, and tan. Some sections contain buildings, roads, or other features. The labels are in white text with a black outline, positioned in the upper left corner of each section.

101N 61W
Section: 14

101N 61W
Section: 13

101N 60W
Section: 18

101N 61W
Section: 23

101N 61W
Section: 24

101N 60W
Section: 19

101N 61W
Section: 26

101N 61W
Section: 25

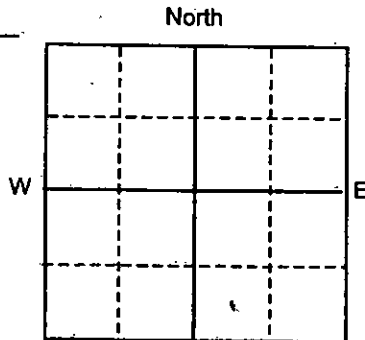
101N 60W
Section: 30

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location 1/4 1/4 Sec Twp Rg County

Please mark well location with an "X"



Well Completion Date

12-7-20

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
NONE ft. from (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other
 If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>200</u> LB/FT	<u>5</u> IN	<u>0</u> FT	<u>29</u> FT	<u>7 7/8</u> IN
<u>250</u> LB/FT	<u>5</u> IN	<u>29</u> FT	<u>129</u> FT	<u>7 7/8</u> IN
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u> </u> IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>#20</u>	<u>2</u>	<u> </u> Lb/gal	<u>0</u> Ft	<u>25</u> Ft
<u> </u>	<u> </u>	<u> </u> Lb/gal	<u> </u> Ft	<u> </u> Ft

Describe grouting procedure

Tremie Pipe

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 5 Inches Length 100 Feet
 Material PVC
 Slot Size 1/25 Set From 29 Feet to 129 Feet
 Other information
WAS A PACKER OR SEAL USED? ☒ Yes ☐ NoIf so, what material? Enviro Plug

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorine
☐ No, Why Not?
 Lab to which water quality sample sent for analysis
Well Owner: Robert MarschenBusiness Name: Address: City, State, Zip: SD

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Top Soil</u>	<u>0</u>	<u>1</u>
<u>Yellow Clay</u>	<u>1</u>	<u>23</u>
<u>Blue Clay</u>	<u>23</u>	<u>33</u>
<u>Chalk</u>	<u>33</u>	<u>129</u>

STATIC WATER LEVEL 39 FEETIf flowing: closed in pressure PSIGPM flow through Inch pipeControlled by ☐ Valve ☐ Reducers ☐ Other Reduced flow rate GPMCan well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: Submersible
☐ Bailed
☐ Other

Pumping Level Below Land Surface

40 Ft. After 6 Hrs. pumped 30 GPM Ft. After Hrs. pumped GPMIf pump installed, pump rate: GPM

REMARKS

This well was drilled under license # 722 and this report is true and accurate.Drilling firm: Stretch's Well Service Inc

Signature of License Representative:

Tom Grathoff

Signature of Well Owner or Equitable Property Holder:

 Date: 12-18-20

Robert Maeschen
Job NameEast - South of
Artesian SD
Location12-7-20
Date

Rig No.

Duke
Mc IV
Foreman

Jt #	Depth	Time	Remarks
1	0-15	2:15	GL-1 TOP SOIL BLACK
2	15-30	2:51	1-22 Yellow Sandy Clay with small brown streaks
3	30-45	3:30	and pebbles
4	45-60	3:50	22-23- peck
5	60-75	4:22	23-33 Yellow sandy clay with pebbles small
6	75-90	4:50	streaks reddish brown clay
7	90-105	5:12	33-42 Gray chalk taken H2O
8	105-120	12:18	42-50 Gray chalk a lot of chalk stone
9	120-135	1:01	taken H2O lighter gray - 40 hard Rattle
			52-59 Gray chalk - chalk stone
			drinking H2O
			59-63 Gray chalk chalk stone small
			shale streaks taken H2O
1	0-15	K	63-65 Darker chalk with chalk stone
2	15-25	DC	very little fluid lost
3	25-40	R	65-70 Darker chalk chalk stone small
4	40-55	R	shale streaks little H2O
5	55-70	R	70-72 Darker chalk chalk stone
6	70-85	R	little more H2O
7	85-100	R	72-74 Black chalk
8	100-115	R	74-81 very dark gray chalk little H2O
9	115-130	K	81-83 Dark gray drinking H2O
			83-92 light gray taken H2O
			Dark white little gray chalk
			taking H2O about 10
			lose circulation
			92-112 Dark white chalk with chalk stone
			taking a lot of fluid
			112-127 light gray chalk little fluid
			small streaks of white
			127-130 Dark chalk very little fluid lost
			with shale streaks
			WD-129 - wh 38.70
			29' 5" PUC casing
			100' 5" 25 slot PUC well screen
			2- 5" PUC caps
			3 bars hole plug
			Per rock

WORK ON SWIRE at 15

Run Pump in test

STRETCH'S WELL SERVICE
PUMPING REPORT

	A	B	C	D	E
1	38.70	$\frac{GL}{WH}$	Stretch's Pumping Log		
2	Time	Gal. per Minute	Pumping Level	Draw Down	Gal. per Foot
3	4.30	10	39.10	40 .40	25
4	4.35	10	39.10	.40	25
5	4.40	10	39.10	.40	25
6	4.45	10	39.10	.40	25
7	4.50	10	39.10	.40	25
8	4.55	20	39.60	.90	22.22
9	5.00	20	39.60	.90	22.22
10	5.05	20	39.60	.90	22.22
11	5.15	20	39.60	.90	22.22
12	10.30	30	40.05	1.35	22.22
13	10.40	30	40.10	1.40	21.42
14	10.50	30	40.15	1.45	20.68
15	11.00	30	40.20	1.50	20
16	11.10	30	40.20	1.50	20
17	11.20	30	40.20	1.50	20
18	11.30	30	40.20	1.50	20
19	11.45	30	40.20	1.50	20
20	12.00	30	40.20	1.50	20
21	12.15	30	40.20	1.50	20
22	12.30	30	40.20	1.50	20
23					
24					

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date December 21, 2020

RECEIVED OF Robert D Maeschen 40568 266th St. Ethan SD 57334

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

Fee for Application for Permit No. <u>8465-3</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>8465-3</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



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. 8465-3, Robert Maeschen**

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. 8465-3, Robert Maeschen, 40568 266th St, Ethan SD 57334.

The Chief Engineer is recommending APPROVAL of Application No. 8465-3 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. 8465-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control 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. 8465-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund, Chief Engineer
February 23, 2021

**Report to the Chief Engineer on
Water Permit Application No. 8465-3**

Robert Maeschen
26 January 2021

Water Permit No. 8465-3 seeks to withdraw up to 1.22 cubic feet of water per second (cfs) from one well to be completed into the Niobrara aquifer (approximately 129 ft deep) located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24 for irrigation of 91 acres located in the E $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24; all in T101N-R61W. This site is located approximately five miles west of Ethan, South Dakota.

Aquifer: Niobrara (NBRR)

Hydrogeological characteristics

The Niobrara aquifer consists of the permeable and saturated portions of the late-Cretaceous-age Niobrara formation [1]. The Niobrara formation is a “white to dark-gray argillaceous chalk, marl, and shale” ranging in thickness from 160-225 ft in South Dakota [2]. Since the Niobrara formation is fairly fine-grained, production from the aquifer is often controlled by secondary porosity features such as fractures, faults, and solution cavities [3]. The Niobrara formation underlies approximately 400 square miles of Davison County [3]. Some portions of the Niobrara formation are physically separate from the main body of the formation because the area between them eroded away before it was all overlain by glacial till. The characteristics of the Niobrara aquifer vary greatly across South Dakota, but in the area of this application it is possible for wells completed into the Niobrara aquifer to deliver up to 1,000 gallons per minute [4], meaning the aquifer is fairly permeable in the area of this application.

The well completion report submitted with this application, for a test well completed on December 7, 2020, indicates the driller encountered yellow clay from 1 to 23 feet below grade, blue clay from 23 to 33 feet below grade, and chalk from 33 to 129 feet below grade. The well driller installed screen in the well from 29 to 129 feet below grade. The well driller measured the static water level to be 39 feet below grade at the time of drilling. The fact that the water level was below the top of the formation combined with the presence of a thick layer of clay above the chalk means that the Niobrara aquifer is under buried, unconfined conditions at the location of this application.

Applicable South Dakota Codified Law (SDCL)

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued if there is reasonable probability unappropriated water is 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 water 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 Niobrara aquifer is not older and stratigraphically lower than the Greenhorn Formation [1]. Therefore, it is necessary to find that recharge exceeds withdrawals to approve this application.

Availability of Water

Hydrologic budget

Since the Niobrara aquifer has several portions that are hydrologically disconnected from the main body of the formation, and this application is in the main body of the formation, this hydrologic budget will exclude water rights/permits not completed into the main body of the formation.

Recharge

Recharge to the Niobrara aquifer is likely by infiltration from precipitation where the aquifer is near land surface and interflow from adjacent aquifers when the hydraulic head from those aquifers is higher than the hydraulic head in the Niobrara aquifer. There is no estimate of recharge available and a source that normally gives an estimate of the porosity of other bedrock aquifers does not attempt to do so for the Niobrara aquifer [3], likely due to how variable the aquifer's characteristics are across South Dakota.

Discharge

Discharge from the Niobrara aquifer is likely by groundwater interflow to adjacent aquifers when the hydraulic head in the Niobrara aquifer is higher than them, evapotranspiration where the water table is near land surface, and domestic and appropriative well withdrawals. Domestic wells withdraw water at a relatively low rate, and water distribution systems that sell domestic water are prevalent in the area of this application. Therefore, for this hydrologic budget domestic well withdrawals are considered negligible. There are 56 water rights/permits authorized to withdraw from the Niobrara aquifer in the main body of the formation. Of those water rights/permits, 33 are for irrigation, 8 are for commercial use, 8 are for municipal use, 4 are for institutional use, one is for industrial use, one is for geothermal heating, and one has fish and wildlife propagation listed as its primary use.

Figure 1 shows reported irrigation in the main body of the Niobrara aquifer over the period of record (1979 – 2020) [5] [6]. The average irrigation reported was 996 ac-ft/yr [5] [6]. Twelve of the 33 irrigation water rights have been approved since the 2012 drought [7] [8], and Figure 1 shows a slight increase in irrigation recently, so it is likely irrigation practices have changed over the period of record and an average over the entire period of record does not accurately reflect the current average withdrawal due to irrigation. The average irrigation reported in the main body of the Niobrara aquifer over the last ten years (2011 – 2020) is 1,428 ac-ft/yr.

Of the non-irrigation water rights/permits, Water Right Nos. 1062-3, 4121A-3, 4264A-3, 4264B-3, 4278-3, and 5356-3 are on standby for emergency use only, so they are assumed to withdraw a negligible amount of water on average [9] [10]. Water Permit No. 6703-3 is required to report its annual withdrawal and has withdrawn an average of 44.25 ac-ft/yr over its four years of use [11]. Water Permit No. 8413-3 is also required to report its annual withdrawals but was approved late

in 2020 so no reports are available yet [11]. Therefore, it is assumed for the hydrologic budget it will develop its full annual limit of 77 ac-ft/yr [7]. The rest of the non-irrigation water rights/permits are assumed to withdraw at their maximum licensed/permitted pump rate 60% of the time, for a total withdrawal of 779 ac-ft/yr [7].

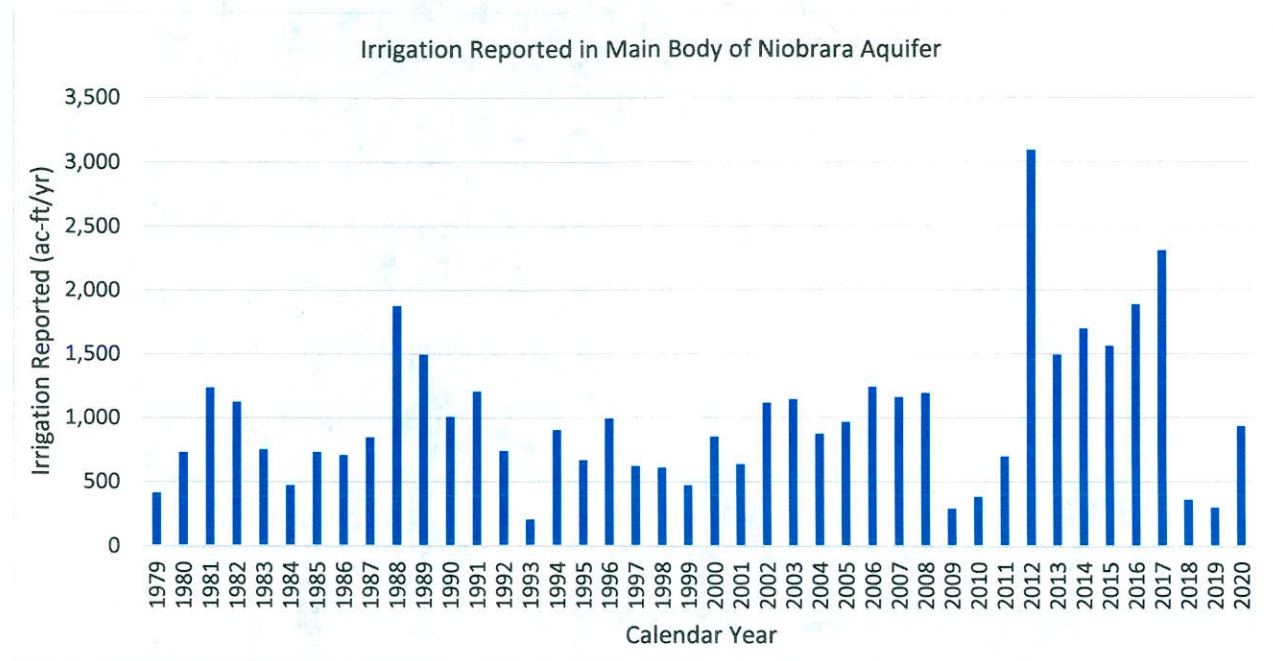


Figure 1: Irrigation reported in the main body of the Niobrara aquifer [5] [6].

Summary of hydrologic budget

There is no estimate of recharge to the main body of the Niobrara aquifer available. Using the higher estimate of 1,428 ac-ft/yr withdrawn for irrigation, the average reported withdrawal for Water Permit No. 6703-3 (44 ac-ft/yr), the total volume available for Water Permit No. 8413-3 of 77 ac-ft/yr, and assuming all other non-irrigation water rights/permits other than those on standby pump their licensed/permitted pump rate 60% of the time (totaling to 779 ac-ft/yr), the average estimated withdrawal from the main body of the Niobrara aquifer is 2,328 ac-ft/yr. Since there is no estimate of recharge available, a hydrologic budget cannot show whether or not recharge exceeds withdrawals.

Observation wells

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires the Water Management Board to rely upon the record of observation wells in addition to other information in order to determine the availability of water. The Water Rights Program maintains 57 observation wells completed into the Niobrara aquifer [12]. The nearest of those to this application is Observation Well DN-78D, located approximately 0.5 miles south of the field this application proposes to irrigate. Water levels in Observation Well DN-78D are representative of the other observation wells in Davison county, in that water levels tend to decline during dry periods and increase during wet periods and that the observation well records also show fluctuations in water level due to seasonal pumping, but water levels return to typical values each spring. Natural conditions have an overwhelming influence on the water levels in the aquifer, compared to artificial

withdrawals. Water levels in the aquifer have remained fairly steady over time, even as the Water Management Board continues to approve new applications [12] [7]. Therefore, based on observation well analysis, there is reasonable probability unappropriated water is available for this application.

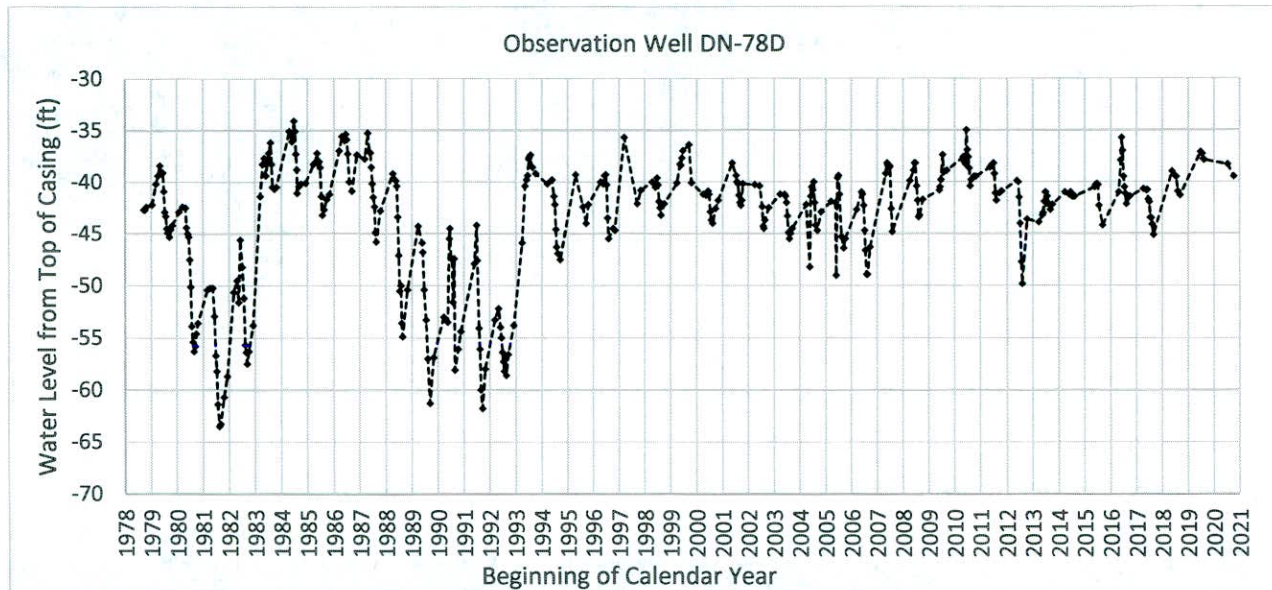


Figure 2: Water levels measured in Observation Well DN-78D [12]

Potential for unlawful impairment of 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

Figure 3 shows Niobrara aquifer water rights/permits and DENR observation wells near this application and Table 1 shows details about the water rights/permits in Figure 3.

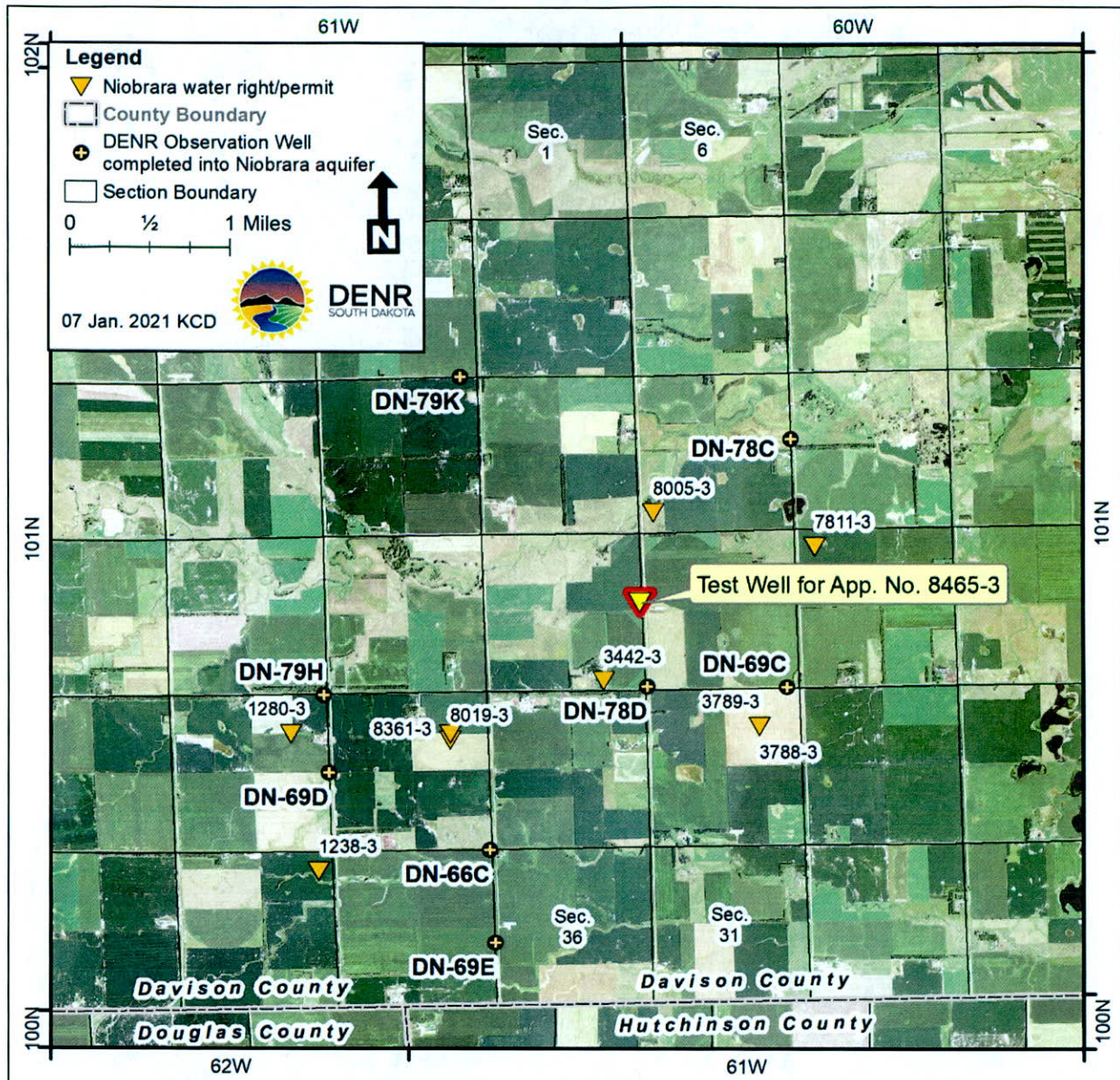


Figure 3: Niobrara water rights/permits and observation wells near this application

Table 1: Water rights/permits shown in Figure 3

Permit No.	Last Name	First Name	Priority	Status	Use Type	Pump Rate (cfs)	Acres
1238-3	Neugebauer	Lincoln	1965-12-14	License	Irrigation	1.880	386
1280-3	Neugebauer	Marty	1966-06-08	License	Irrigation	2.040	152
3442-3	Maeschen	Norman F	1976-09-01	License	Irrigation	1.220	108
3788-3	Rumbolz	Lyle	1977-03-09	License	Irrigation	1.330	120
3789-3	Rumbolz	Randal L	1977-03-09	License	Irrigation	1.330	130
7811-3	Storm	Charles	2013-03-27	Permit	Irrigation	1.780	133
8005-3	Maeschen	Robert	2014-04-24	Permit	Irrigation	1.560	180
8019-3	Hohn	Mark	2014-05-28	Permit	Irrigation	1.730	145
8361-3	Hohn	Mark	2018-06-18	Permit	Irrigation	0.170	145

Since the applicant does not have the well for this application drilled, the exact distance between this application and nearby water rights cannot be known. However, the applicant has declared he intends to complete the production well for this application somewhere in the same quarter-quarter as the field to be irrigated. The nearest water right/permit to this application is Water Permit No. 8005-3, which is located approximately 0.2 miles northeast of the field this application proposes to irrigate and is held by the applicant. The next nearest water right/permit is Water Right No. 3442-3, which is located approximately 0.4 miles south of the field this application proposes to irrigate. The nearest domestic well on file with DENR that is likely to be completed into the Niobrara aquifer is located in the southwest quarter of Section 24, T101N R61W. Since the accuracy of that well is only known to the nearest quarter section, and that quarter is adjacent to the field to be irrigated, it is possible that the applicant could drill his well very close to that domestic well. There is no record of unlawful impairment of an adequate well in the Niobrara aquifer in Davison, Hansen, Douglas, or Hutchinson counties [13]. Given the lack of complaints and the fact that the applicant would likely impair his own water permit before impairing nearby water rights, there is reasonable probability the applicant can develop this application without unlawful impairment of existing water rights with adequate wells. However, out of an abundance of caution, the applicant should control his withdrawals so that nearby existing water rights and adequate domestic wells are not impacted.

Conclusions

1. Water Permit Application No. 8465-3 proposes to withdraw up to 1.22 cubic feet of water per second (cfs) from one well to be completed into the Niobrara aquifer (approximately 129 ft deep) located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24 for irrigation of 91 acres located in the E $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24; all in T101N-R61W.
2. Based on observation well analysis, there is reasonable probability unappropriated water is available for this application.
3. There is reasonable probability the applicant can develop this application without unlawful impairment of existing water rights.



Kimberly C. Drennon
Natural Resources Engineer
Water Rights Program

References

- [1] M. D. Fahrenbach, F. V. Steece, J. F. Sawyer, K. A. McCormick, G. L. McGillivray, L. D. Schulz and J. A. Redden, "South Dakota Stratigraphic Correlation Chart," SD DENR Geological Survey Program, Vermillion, South Dakota, 2010.
- [2] J. E. Martin, J. F. Sawyer, M. D. Fahrenbach, D. W. Tomhave and L. D. Schulz, "Geologic Map of South Dakota," SD DENR Geological Survey Program, Vermillion, South Dakota, 2004.
- [3] L. S. Hedges, S. L. Burch, D. L. Iles, R. A. Barari and R. A. Schoon, "Evaluation of ground-water resources eastern South Dakota and upper Big Sioux River, South Dakota and Iowa, Tasks 1-4," U.S. Army Corps of Engineers, Omaha, Nebraska, 1982.
- [4] D. S. Hansen, "Major aquifers in Hansen and Davison Counties, South Dakota," SD DENR Geological Survey Program, Vermillion, South Dakota, 1983.
- [5] SD Water Rights, "Irrigation Questionnaires," SD DENR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2020.
- [6] SD Water Rights, "Irrigation Questionnaire Summaries," SD DENR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2019.
- [7] SD Water Rights, "Water right/permit files," Pierre, South Dakota, 2021.
- [8] NOAA, "Climate at a Glance - Statewide Time Series - Precipitation South Dakota," NOAA National Centers for Environmental Information, 1 February 2021. [Online]. Available: <https://www.ncdc.noaa.gov/cag/>. [Accessed 12 February 2021].
- [9] Drinking Water Program, "Your Water System Information," SD DENR Drinking Water Program, 9 February 2021. [Online]. Available: <https://denr.sd.gov/des/dw/sysinfo.aspx>. [Accessed 9 February 2021].
- [10] B. Friedeman, Interviewee, *Environmental Scientist II, DENR Drinking Water Program*. [Interview]. 9 February 2021.
- [11] SD Water Rights, "Non-irrigation yearly reports," SD DENR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2020.
- [12] SD Water Rights, "Observation wells," Pierre, South Dakota, 2021.
- [13] SD Water Rights Program, "County files," SD DENR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2021.

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, February 24, 2021 9:17 AM
To: maescheninc@gmail.com
Subject: Water Permit Application No. 8465-3. Robert Maeschen
Attachments: 0798.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 papers as soon as possible to authorize publication and arrange for payment. The notice is scheduled to be published March 3, 2021. This information is being mailed to you today.

Karen Schlaak

Water Rights Program
(605) 773-3352



AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

ss.

COUNTY OF DAVISON

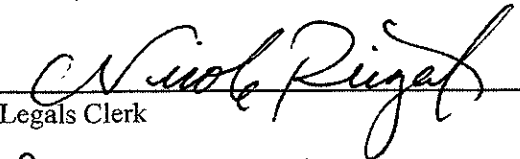
Nicole Riegert, of said county, being first duly sworn, on oath, states as follows:

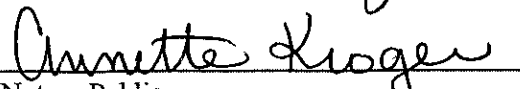
1. I am the designated agent of the *Mitchell Republic*, a daily newspaper published in the city of Mitchell, in said County of Davison, and State of South Dakota; I have full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Davison and State of South Dakota, for at least one year next prior to the first publication of the attached public notice.

2. The newspaper listed on the exhibit published the advertisement of: *Legal Notice*; (1) time: *March 3, 2021*, as required by law or ordinance.

3. That the full amount of the fee charged for the publication of the attached public notice insures to the sole benefit of the publisher or publishers; that no agreement or 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, that the fees charged for the publication thereof are: \$24.99

Subscribed and sworn to before me this 3rd day of March, 2021.


Legals Clerk


Notary Public
My Commission Expires: May 15, 2026



NOTICE OF APPLICATION NO. 8465-3 to Appropriate Water

Notice is given that Robert Maeschen, 40568 266th St. Ethan SD 57334 has filed an application for a water permit to appropriate 1.22 cubic feet of water per second from one well to be completed into the Niobrara Aquifer (approximately 129 feet deep) located in the SE 1/4 NE 1/4 Section 24 for irrigation of 91 acres located in the E 1/2 NE 1/4, SW 1/4 NE 1/4 Section 24; all in T101N-R61W. This site is located approximately five miles west of Ethan SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8465-3 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 March 15, 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 \$24.99.
(March 3, 2021) 2877616

RECEIVED

MAR 08 2021

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED

MAR 08 2021

WATER RIGHTS
PROGRAM

ROBERT MAESCHEN
40568 266TH ST
ETHAN SD 57334

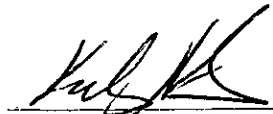
STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

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
3+3 NOTICE OF APPLICATION

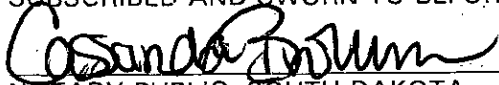
TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 3rd DAY OF March, 2021
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$24.01 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION 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: 03/03/2021

FILED ON: 03/03/2021



SUBSCRIBED AND SWORN TO BEFORE ME THIS 3rd DAY OF March, 2021



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

Ad text : 3+3

NOTICE OF APPLICATION

NO. 8465-3 to Appropriate Water

Notice is given that Robert Maeschen, 40568 266th St. Ethan SD 57334 has filed an application for a water permit to appropriate 1.22 cubic feet of water per second from one well to be completed into the Niobrara Aquifer (approximately 129 feet deep) located in the SE 1/4 NE 1/4 Section 24 for irrigation of 91 acres located in the E 1/2 NE 1/4, SW 1/4 NE 1/4 Section 24; all in T101N-R61W. This site is located approximately five miles west of Ethan SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8465-3 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 March 15, 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 \$24.01

RECEIVED

MAR 08 2021

WATER RIGHTS
PROGRAM

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, February 24, 2021 9:11 AM
To: legals@mitchellrepublic.com
Subject: 8465-3, Robert Maeschen
Attachments: 8465-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on March 3, 2021.

Robert Maeschen, 40568 266th St, Ethan SD 57334 (605 999-1170) 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, February 24, 2021 9:11 AM
To: Jackie Lammers (jackie.lammers@yankton.net)
Subject: 8465-3, Robert Maeschen
Attachments: 8465-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on March 3, 2021:

Robert Maeschen, 40568 266th St, Ethan SD 57334 (605 999-1170) 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





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.**

February 24, 2021

Robert Maeschen
40568 266th St
Ethan SD 57334

Dear Mr. Maeschen:

Water Permit Application No. 8465-3 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 Daily Republic printed at Mitchell SD (Ph # 605 996-5514) and the Daily Press and 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.

Instruction to Newspaper - Publish the Notice on March 3, 2021. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 8465-3 to Appropriate Water

Notice is given that Robert Maeschen, 40568 266th St. Ethan SD 57334 has filed an application for a water permit to appropriate 1.22 cubic feet of water per second from one well to be completed into the Niobrara Aquifer (approximately 129 feet deep) located in the SE 1/4 NE 1/4 Section 24 for irrigation of 91 acres located in the E 1/2 NE 1/4, SW 1/4 NE 1/4 Section 24; all in T101N-R61W. This site is located approximately five miles west of Ethan SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8465-3 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 March 15, 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 _



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

APR 06 2021

Robert Maeschen
40568 266th St
Ethan SD 57334

Dear Mr. Maeschen:

Enclosed is Water Permit No. 8465-3 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

enclosure

8465-3

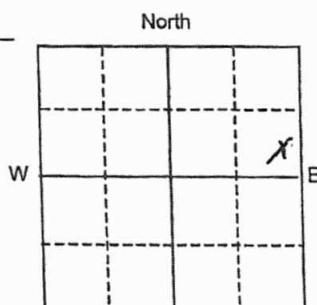
SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 NE 1/4 Sec 24 Twp 101N Rg 61W Well Owner: Robert MescheryCounty Davison

Please mark well location with an "X"



Well Completion Date

5-25-21

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
NONE ft. from (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Circulation

CASING DATA:

☐ Steel ☒ Plastic ☐ Other
 If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>50420</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>45</u> FT	<u>26</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Portland</u>	<u>60</u>	<u>0</u> Lb/gal	<u>0</u> FT	<u>45</u> FT
		Lb/gal	FT	FT

Describe grouting procedure

Tremie Pipe

SCREEN:

☐ Perforated pipe ☐ Manufactured
 Diameter _____ Inches Length _____ Feet

Material

Slot Size _____ Set From _____ Feet to _____ Feet

Other information

open holeWAS A PACKER OR SEAL USED? ☒ Yes ☐ NoIf so, what material? CementDescribe packer(s) and location 0-45'

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorine☐ No, Why Not?

Lab to which water quality sample sent for analysis

Business Name:

Address: 40568 26th St.City, State, Zip: EMMA SD 57334

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Top soil</u>	<u>0</u>	<u>1</u>
<u>Yellow clay</u>	<u>1</u>	<u>23</u>
<u>Blue clay</u>	<u>23</u>	<u>33</u>
<u>Chalk</u>	<u>33</u>	<u>129</u>

STATIC WATER LEVEL

39

FEET

If flowing: closed in pressure

PSI

GPM flow

through

Inch pipe

Controlled by

☐ Valve☐ Reducers☐ Other

Reduced flow rate

GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: Air☐ Bailed☐ Other

Pumping Level Below Land Surface

Ft. After

Hrs. pumped

1000 GPM

Ft. After

Hrs. pumped

GPM

If pump installed, pump rate:

GPM

REMARKS

RECEIVED

NOV - 4 2021

WATER RIGHTS PROGRAM

This well was drilled under license # 722 and this report is true and accurate.

Drilling firm:

Stretch's Well Service Inc.

Signature of License Representative:

Tom Grattner

Signature of Well Owner or Equitable Property Holder:

Date: 11/4/21

76025

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8465-3

I have this day, August 21, 2024, made a thorough examination of the water use system constructed by Robert Maeschen of 40568 266th St, Ethan SD 57334 holder of Permit No. 8465-3, bearing the priority of December 21, 2020, authorizing the diversion of 1.22 cu. ft. per second of the waters of groundwater Niobrara Aquifer for irrigation use purposes, in Davison County.

Inspection contact & relationship Robert Maeschen, owner

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Stretch's Well Service
- 2) No. of Wells 1
- 3) Depth(s) 129 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 16 inches
- 2) Length 45 feet
- 3) Type plastic

Screen:

- 1) Type Open Hole
- 2) Length 84 feet
- 3) Static water level 39 feet

Pump:

- 1) Make Grundfos
- 2) Model submersible
- 3) Capacity 500 GPM

Motor:

- 1) Make Grundfos
- 2) Model No. submersible
- 3) Horsepower rating 50 hp

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

- 1) Type PVC
 - 2) Size 8 inches
 - 3) Length 1830 feet
- Comments: N/A

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make T-L
- 2) Overall length 1220 feet
- 3) Number of towers 8
- 4) End gun Y
- 5) Capacity 500 GPM

Chemigation Equipment:

- 1) Does chemigate Y
- 2) Main line check valve Y
- 3) Inspection port/air relief Y
- 4) Low pressure drain Y
- 5) Discharge is 20' from source Y
- 6) Interlock type electrical
- 7) Injection pump type piston
- 8) Injection check valve Y
- 9) Injection line check valve or positive displacement pump Y

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
If no, describe: none
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y
List any extended period of nonuse: none
- 3) Exceptions to compliance are: none

E. Condition and Location:

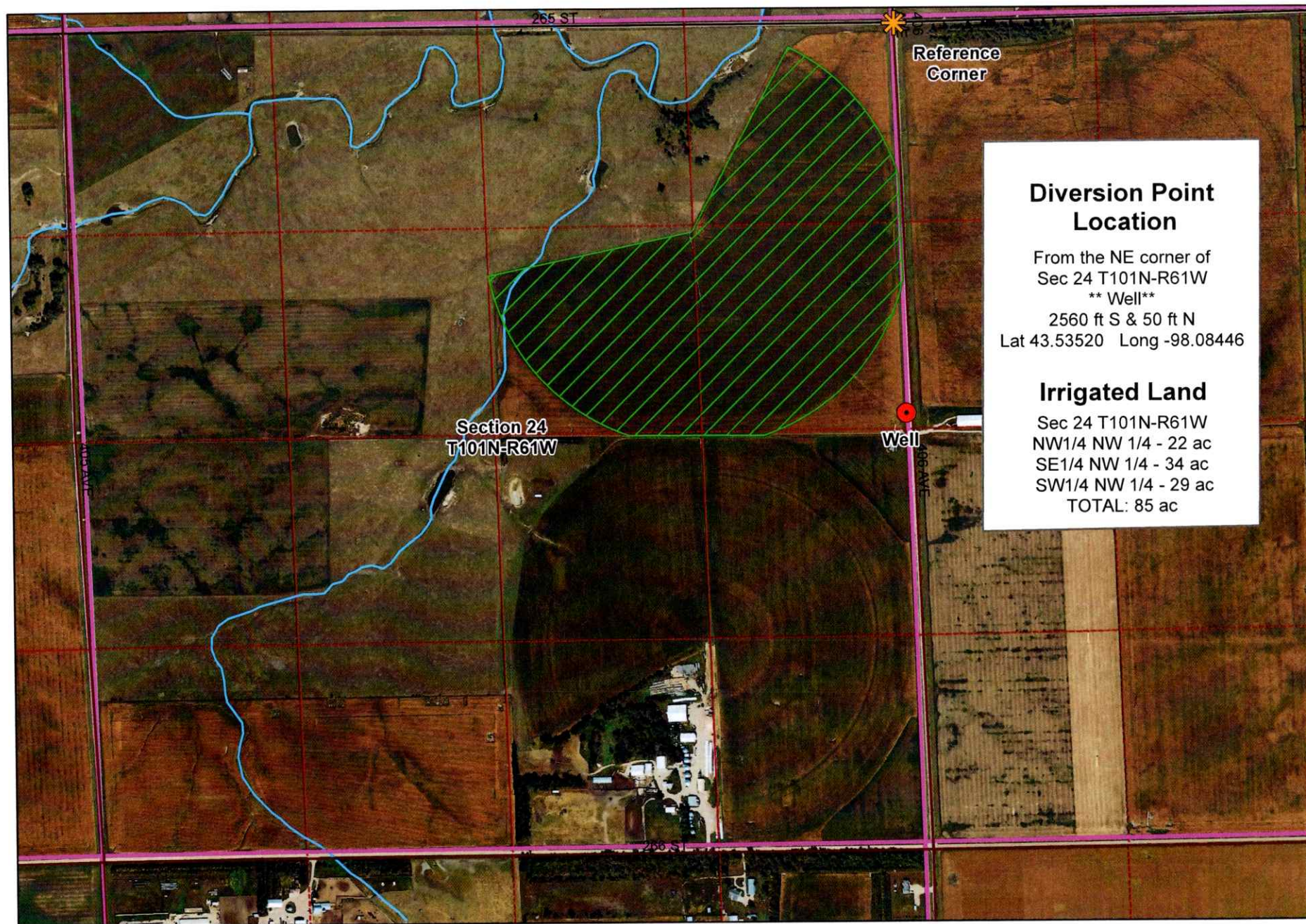
1. The system is in poor, good, etc condition with the point(s) of diversion located as follows: from the NE corner of Sec 24 T101N-R61W 2560 ft S and 50 ft W, latitude of 43.53520 and longitude of -98.08446, SE ¼ NE ¼.
2. The works are capable of diverting and conveying to the place of use 1.11 cu. ft. per second of water which is to be used for irrigation use. Water has been put to beneficial use to the maximum extent as follows: All land is located in Sec 24 T101N-R61W NE ¼ NE ¼ - 22 ac SE ¼ NE ¼ - 34 ac SW ¼ NE ¼ - 29 ac comprising a total of 85 acres of land and the license should be issued for 1.11 cfs.
3. All structures, wells and lands on map Y
If no, describe: none

F. Comments or other permit(s) associated with the project:
none.



Mark D Rath
Water Right Inspector
DANR, Water Rights Program

Date report completed: 8/27/2024



Diversion Point Location

From the NE corner of
Sec 24 T101N-R61W
** Well**
2560 ft S & 50 ft N
Lat 43.53520 Long -98.08446

Irrigated Land

Sec 24 T101N-R61W
NW1/4 NW 1/4 - 22 ac
SE1/4 NW 1/4 - 34 ac
SW1/4 NW 1/4 - 29 ac
TOTAL: 85 ac



0.5 0.25 0 0.5 Miles

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

Date August 20, 2024

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

FROM: Robert Maeschen
(name)

410568 266th
(address)

Elkhon SD 57334
(city, state, zip)

605 999 1170
(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. 8465-3 states that the water use system is to be constructed by
3/15/2026, and water is to be put to beneficial use by 3/15/2030.
(date) (date)

The water use system was completed on 6/18/2022.
(date)

Applying the water to beneficial use was completed on 6/18/2022.
(date)

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

[Signature]
(signature)





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 20 2024

8465-3

Robert Maeschen
40568 266th St
Ethan SD 57334

Dear Mr. Maeschen:

Enclosed is Water License No. 8465-3. 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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8465-3

(1) Robert Maeschen, 40568 266th St, Ethan SD 57334, made Application No. 8465-3, December 21, 2020, for a water permit to divert 1.22 cubic feet of water per second from groundwater, one well (Niobrara Aquifer), Davison County, South Dakota for irrigation purposes. Permit No. 8465-3, with a priority date of December 21, 2020, was approved March 15, 2021, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 15, 2026, and for the application to beneficial use of water on or before March 15, 2030.

The permit holder submitted a Notice of Completion of Works and Application of Water to Beneficial Use form on August 20, 2024. The Notice stated the diversion system was completed and the water was placed to beneficial use on June 18, 2022.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.11 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 2,560 ft S & 50 ft W of the NE corner Section 24, T101N, R61W (SE $\frac{1}{4}$ NE $\frac{1}{4}$)
(Latitude 43.53520 & Longitude -98.08446)

(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: June 1 – September 30.

(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 24, T101N, R61W
NE $\frac{1}{4}$ NE $\frac{1}{4}$ - 22 acres
SW $\frac{1}{4}$ NE $\frac{1}{4}$ - 29 acres
SE $\frac{1}{4}$ NE $\frac{1}{4}$ - 34 acres
TOTAL: 85 acres

(5) Pursuant to South Dakota Water Law 46-5-30.1 Robert Maeschen, the holder and/or owner of Water Right No. 8465-3 is issued a license to appropriate water, the right to use 1.11 cubic feet of water per second from groundwater, one well (Niobrara Aquifer), with a priority date of December 21, 2020, 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. 8465-3 and subject to the following qualifications:

1. The well approved under Water Permit No. 8465-3 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 withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

continued

2. The well authorized by Permit No. 8465-3 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. *(The well was drilled in 2021 by Stretch's Well Service Inc. A copy of the well completion report is on file with the Water Rights Program.)*
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Eric Gronlund

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

SEP 20 2024

date





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

January 14, 2025

NOTICE

TO: ROBERT MAESCHEN, 40568 266TH ST, ETHAN, SD 57334

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

SUBJECT: Reporting Requirement for 2024 Irrigation Questionnaire(s)

Our records indicate your 2024 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 3442-3, 8005-3 & 8465-3. The request for the Questionnaire was dated October 23, 2024. The Water Management Board has directed owners of water permits who have not submitted the 2024 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 3442-3, 8005-3 & 8465-3 qualification:

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

The hearing will be held on **Wednesday, March 5, 2025, 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) 3442-3, 8005-3 & 8465-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. 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 questionnaire(s) is (are) received in this office before the **March 5, 2025**, hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Amanda Dewell at (605) 773-3352 or email at amanda.dewell@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: BLUPMV**

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.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

January 24, 2025

3442-3, 8005-3 & 8465-3

Robert Maeschen
40568 266th St
Ethan SD 57334

Dear Mr. Maeschen:

I am writing to acknowledge the receipt of your 2024 irrigation questionnaire(s).

You may disregard the January 14, 2025, "Notice" concerning the reporting requirements for Water Permit No(s). 3442-3, 8005-3 & 8465-3. The information was received prior to the March 5, 2025, Water Management Board meeting and the above listed permit number(s) have been removed from the agenda.

If you have any questions or concerns, please contact me.

Sincerely,

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