

WATER PERMIT NO. 8737-3

Name of Applicant: Joe Davis

Address: 20968 482nd Ave, Elkton SD57026

Phone: 605-690-6184

Amount of Water Claimed: 2.22 cfs

Total Acres: 150

Source of Water Supply: Groundwater

Water to be used for: Irrigation

County: Brookings

Type of Waste Disposal System:

Location: Approx 6 miles northwest of Elkton *past Bushnell*

PRIORITY

Date Received: 2-14-2023

Application/License Fee: \$1,050.00

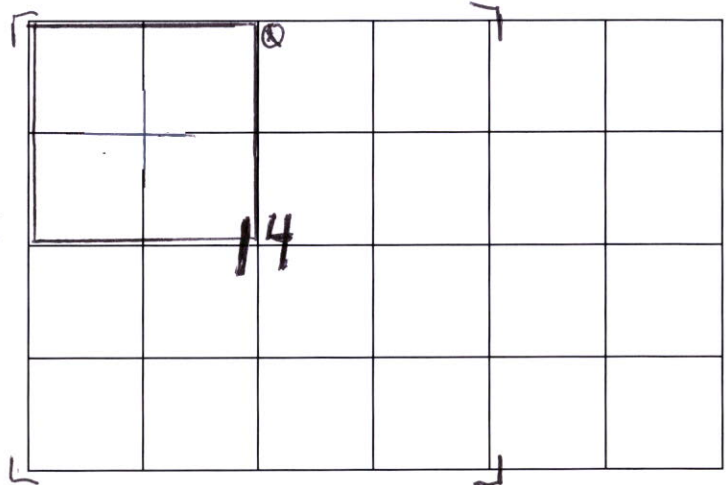
Corrected Application Received: 3-22-2023

Period of Annual Use: May 1 – Sept 30

Remarks: Requesting greater div rate than statutory limit

Diversion Point: NW 1/4 NE 1/4 Sec 14 – T110N – R48W

Land to be Irrigated: NW 1/4 Sec 14; all in T110N – R48W



Depth of Well: 232

Well Driller: Kaiser Well Drilling

Remarks:

Type of Map: aerial

Reviewed and the Number Assigned on: 3-22-2023

By: Rachel Rodriguez

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8737-3**

Date of first receipt of application February 14, 2023.

Date of return to applicant for corrections, amendments or changes February 14, 2023.

Date of receipt of corrected application March 22, 2023.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8737-3 to Joe Davis, 20968 482nd Avenue, Elkton SD 57026 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. 8737-3 appropriates 2.22 cubic feet of water per second (cfs) from one well to be completed into the Rutland Aquifer (approximately 232 feet deep) located in the NW 1/4 NE 1/4 Section 14 for irrigation of 150 acres located in the NW 1/4 Section 14; all in T110N – R48W. This site is located approximately 4 miles east of Bushnell 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: May 1 – September 30.
3. The date from which applicant may claim right is February 14, 2023.
4. The date of approval of Permit No. 8737-3 is June 20, 2023.
5. One-fifth of the construction is to be completed on or before December 20, 2025.
6. All construction is to be completed on or before June 20, 2028.
7. Water is to be put to beneficial use on or before June 20, 2032.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8737-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8737-3 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. 8737-3 authorizes a maximum diversion rate of 2.22 cfs for the irrigation of 150 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

JUL 11 2023
date



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

RECEIVED

FEB 14 2023

**OFFICE OF
WATER**

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8737-3</u> Hydrologic Unit <u>10170 202</u>
	Basin <u>Big Sioux River</u>
	Newspaper <u>Brookings Register 692-6271</u>
	(office use only)

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 Joe Davis

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

Mailing Address 20968 482 Ave Elkton SD 57026
(Address) (City) (State) (Zip Code)

Phone _____ Mobile 605 690 6184 Email davis_jth@hotmail.com

2. Amount of water claimed 2.22 *CFS or 1000 **GPM _____ ***AF Total Acreage 150
(*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 one well in the NW corner of the NE1/4 section 14 T110^NR48W (NW 1/4 NE 1/4)
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Brookings

5. County or counties where water will be used Brookings

6. Annual period during which water is to be used May-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
NE 1/4 of the NW1/4 Section 14 T110 R4	<u>35</u>	<u>37.5</u>	
SE 1/4 of the NW 1/4 Section 14 T110 R4	<u>35</u>	<u>37.5</u>	
SW1/4 of the NW1/4 Section 14 T110 R4	<u>35</u>	<u>37.5</u>	
NW1/4 of the NW1/4 Section 14 T110 R4	<u>35</u>	<u>37.5</u>	

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

Center pivot with swing arm corner system

Requesting div rate greater than statutory limit.

I, Joe Davis, the applicant, certify under
Name of Person Title (if applicable)

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

2021-08

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☐ No Drilled by ____
(if yes, please provide copies of logs)

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

For either Existing or Proposed Wells:

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

d) Distance to nearest domestic well on applicant's property 1/2 mile Property owned by others 1/4 mile 300'
5**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



Scholl's Irrigation LLC

Jim Scholl
605-237-1279

Grower: Grady Davis

Date: 02/04/2023

Farm: System Design 1 : 2/4/2023

Field Name: Field Layout 2 : 2/4/2023

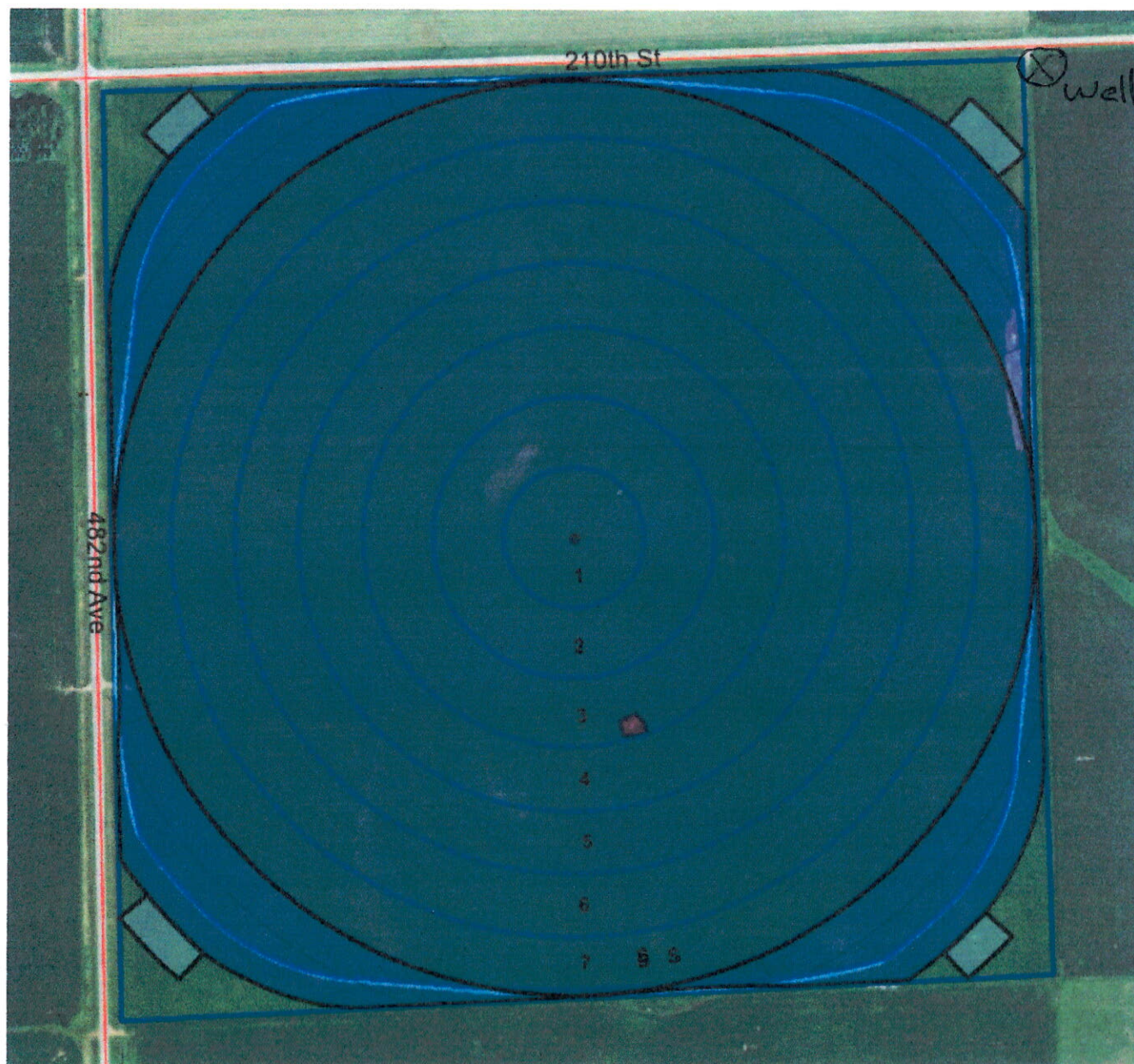
Field Area: 150.91 acres

System Model: E2065

System Length: 1,552.00 ft

Total Irr. Area: 143.55 acres

Number of Spans: 7





110N 48W
Section: 10

110N 48W
Section: 11

110N 48W
Section: 12

110N 48W
Section: 15

110N 48W
Section: 14

110N 48W
Section: 13

110N 48W
Section: 22

110N 48W
Section: 23

110N 48W
Section: 24

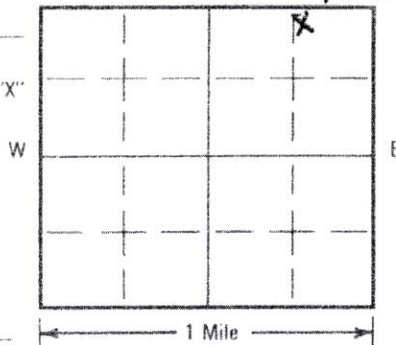
SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location Elkton 1/4 Sec 14 Twp 110N Rg 48W
 County NE NE North 48W

BROOKINGS

Please mark well location with an "X"



Well Completion Date

9-28-22

Well Owner: Tom Davis

Business Name:

Address: 48185 210th St
Elkton SD 57026

WELL LOG:

DEPTH

FORMATION	FROM	TO
TOP SOIL	0	1
Yellow Clay	1	27
Blue Clay	27	52
Yellow Gravel	52	58
Blue Clay	58	187
Yellow Clay	187	210
Gravel-Grey-fine-med	210	214
ROCKS-Coarse-Very coarse Yellow	214	232

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? _____ ft. from _____ (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Direct Rotary

CASING DATA: ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT DIAMETER FROM TO HOLE DIAMETER
sch40 LB/FT 3 IN 12 FT 212 FT 6 IN
 _____ LB/FT _____ IN _____ FT _____ FT _____ IN
 _____ LB/FT _____ IN _____ FT _____ FT _____ IN

GROUTING DATA

Grout Type No. of Sacks Grout Weight From To
Grit Weid F 3 _____ lb./gal 0 ft. 210 ft.
 _____ lb./gal _____ ft. _____ ft.

Describe grouting procedure _____

SCREEN: ☐ Perforated pipe ☒ Manufactured

Diameter 3 IN Length 20 FEET

Material PVC

Slot Size 60 Set From 212 Feet to 232 Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION: Was well disinfected upon completion?

YES, How: _____

NO, Why Not? _____

Laboratory sent to for water quality analysis _____

STATIC WATER LEVEL 120 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped

Describe: air 80-100

☐ Bailed

☐ Other

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

This well was drilled under license # 689

And this report is true and accurate.

Drilling firm Kaiser Well DRILLING

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 9-28-2022

RECEIVED

FEB 01 2023

OFFICE OF
WATER

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date March 22, 2023

RECEIVED OF Joe/Tina Davis 20968 482 Ave., Elkton SD 57026

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

Fee for Application for Permit No. <u>8737-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>850.00</u>
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8737-3</u>	\$ <u>200.00</u>
Fee for Filing Transfer Form _____	\$ _____
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law)	
TOTAL	\$ <u>1050.00</u>

By Eric Gronlund
Chief Engineer
vm

Water Rights Program - File Documentation

NAME: Joe Davis

ADDRESS: Elkton SD

DATE: 3-24-23

RE: Pending application

COMMENTS:

I called Joe Davis who indicated the following:

Distance to nearest domestic well on applicant's property 1/2 mile
Property owned by others 2,900 feet



Karen Schlaak
Water Rights Program

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, March 14, 2023 7:56 AM
To: Joe and Tina Davis
Subject: RE: [EXT] HP Smart

Joe,
Received your map which is what we needed. Please submit the application/license fee of \$1,050.00.
Let me know if you have questions.
Karen

From: Joe and Tina Davis <davis_jth@hotmail.com>
Sent: Monday, March 13, 2023 9:44 PM
To: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: [EXT] HP Smart

I have attached the map for our pending irrigation permit
Thanks Joe Davis

Schlaak, Karen

From: Joe and Tina Davis <davis_jth@hotmail.com>
Sent: Tuesday, February 14, 2023 2:51 PM
To: Schlaak, Karen
Subject: Re: [EXT] Water Permit Application.

Yes .
Tom is my brother. We work together and the land is owned together where the pivot will be. Tom owns the land we're the well is. I will send map in a second email.
Thanks Joe

Get [Outlook for Android](#)

From: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Sent: Tuesday, February 14, 2023 2:43:15 PM
To: davis_jth@hotmail.com <davis_jth@hotmail.com>
Subject: Water Permit Application.

We have received your water permit application. You are planning to email me the map that outlines the area to be irrigated and the proposed well location marked with an "X". The application/license fee will be \$1.050.00. Attached is a well completion report from Kaiser Well Drilling. Is this the test hole you were talking about?

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8737-3, Joe Davis**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Agriculture and Natural Resources concerning Water Permit Application No. 8737-3, Joe Davis, 20968 482nd Avenue, Elkton SD 57026.

The Chief Engineer is recommending APPROVAL of Application No. 8737-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board with the following qualifications:

1. The well approved under Water Permit No. 8737-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8737-3 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. 8737-3 authorizes a maximum diversion rate of 2.22 cfs for the irrigation of 150 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
May 22, 2023

**Report to the Chief Engineer on
Water Permit Application No. 8737-3**

Joe Davis
5 May 2023

Water Permit Application No. 8737-3 seeks to appropriate 2.22 cubic feet of water per second (cfs) from one well completed into the Rutland aquifer (232 feet deep) located in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 14 for irrigation of 150 acres located in the NW $\frac{1}{4}$ Section 14; all in T110N-R48W. 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 east of Bushnell, South Dakota in Brookings County.

Aquifer: Rutland (RUT)

Hydrogeologic Characteristics

The Rutland aquifer is composed of the saturated and permeable portions of a sand and gravel outwash body deposited during the Quaternary Period, which lies between approximately 1,400 and 1,690 feet above NGVD29 and underlies approximately 240 square miles of eastern Brookings County [1]. The aquifer is generally under confined conditions and is 15 feet thick on average [1].

The applicant submitted a test well completion report located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 14 T110N-R48W that was completed on September 28, 2022. The driller reported encountering top soil from land surface to 1 foot below grade, clay from 1 to 52 feet, yellow gravel from 52 to 58 feet, clay from 58 to 210 feet, and rocks and gravel from 210 to 232 feet. The driller placed a 3-inch screen from 212 to 222 feet below grade. The static water level was 120 feet below grade at the time the well was completed, which means the aquifer is under confined conditions at the site of this application and the hydraulic head in the aquifer is 90 feet above the top of the formation. Based on the land surface elevation near the location of this well, it is completed into the Rutland aquifer.

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 that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, and that the proposed use is a beneficial use and in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. This report will only assess the availability of water and possibility of developing this application without unlawful impairment of existing domestic water uses and water rights.

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 Rutland aquifer is younger and

stratigraphically higher than the Greenhorn Formation. Therefore, the Water Management Board must find that recharge to the aquifer exceeds withdrawals to approve this application.

Availability of Water

Hydrologic Budget

Recharge

Recharge to the Rutland aquifer is mainly by groundwater inflow from aquifers and glacial till in contact with the Rutland aquifer [1]. Hamilton [1] states that “additional studies would be necessary to delineate areas and quantities of recharge.” However, he estimates the amount of subsurface outflow through the Rutland aquifer into Moody County is approximately 6,000 ac-ft/yr [1]. Recharge to the aquifer must be equal to or more than outflow, so 6,000 ac-ft/yr is the minimum amount of recharge to the aquifer.

Discharge

Discharge from the Rutland aquifer occurs by subsurface outflow to the Big Sioux aquifer and by domestic and appropriative well withdrawals [1]. Due to the prevalence of stratigraphically higher aquifers and water distribution systems, domestic well withdrawals are estimated to be negligible for this hydrologic budget. There are currently 20 water rights/permits authorized to appropriate water from the Rutland aquifer, including 15 for irrigation, 3 for domestic use, and 2 for commercial use [2]. The non-irrigation water rights/permits are assumed to withdraw at their maximum permitted or licensed diversion rate 60% of the time, for a total estimated withdrawal of 717 ac-ft/yr [2]. This is likely to be an overestimate, based on Water Rights Staff experience.

Irrigation reported in the Rutland aquifer is shown in Figure 1 [3]. Prior to 1989, there were no irrigation water rights/permits authorized to withdraw from the Rutland aquifer [3]. The average irrigation reported over the period of record from 1989 through 2021 is 469 ac-ft/yr [3].

Irrigation practices are likely to have changed over the period of record. The average irrigation reported over the last 10 years of record (2012 through 2021) was 695 ac-ft/yr [3], which is the value that will be used for the hydrologic budget. There is one irrigation permit which is too new to have reported irrigation. It is estimated to apply 10 inches per acre per year over its 80 acres, for an estimated average annual withdrawal of 67 ac-ft/yr. The value of 10 inches per acre per year is an estimate that is intended to be an overestimate of the average annual use.

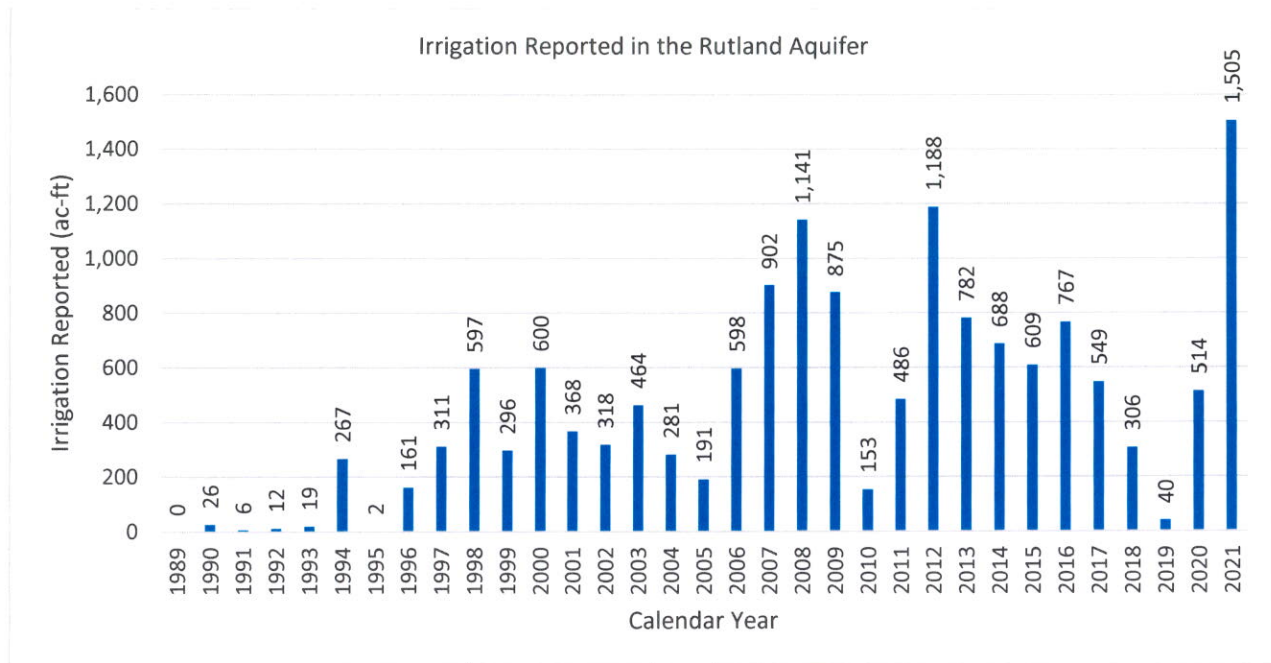


Figure 1: Irrigation reported in the Rutland aquifer [3]

Summary of Hydrologic Budget

Recharge to the Rutland aquifer is likely to exceed 6,000 ac-ft/yr [1]. The estimated withdrawal from non-irrigation water rights/permits is 717 ac-ft/yr [2] and the estimated withdrawal for irrigation water rights/permits is 695 ac-ft/yr [3], plus an estimated 67 ac-ft/yr for an irrigation permit too new to have reported, for a total annual withdrawal of approximately 1,479 ac-ft/yr. This application could withdraw up to 300 ac-ft/yr, if it is approved, although irrigation permits do not tend to withdraw their full appropriation, 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 74:02:05:07 requires that the Water Management Board rely upon the record of observation well data in addition to other information to determine that recharge to the aquifer exceeds withdrawals. The Water Rights Program maintains four wells completed into the Rutland aquifer [4]. The nearest observation well completed into the Rutland aquifer is BG-80I, located approximately 1 mile south of this application [4]. The next-nearest observation well is BG-78F, located 3.5 miles south of this application [4]. Figure 2 shows the water level elevations for all four observation wells [4]. In general, water levels rise during periods of higher-than-average precipitation and decline during periods of lower-than-average precipitation. There are also seasonal declines due to withdrawals during the summer, but water levels in the aquifer return to normal after the spring recharge period [5]. Observation Well BG-78E indicates a slightly decreasing slope following new development in the aquifer in the late 1990s [2], but springtime water levels continue to fluctuate proportionally with annual precipitation [4] [5]. The fact that water level fluctuations are dominated by the effects of annual precipitation and other climate factors indicates that water is naturally discharging from the

aquifer. Therefore, based on the record of observation well analysis, there is reasonable probability unappropriated water is available for this application.

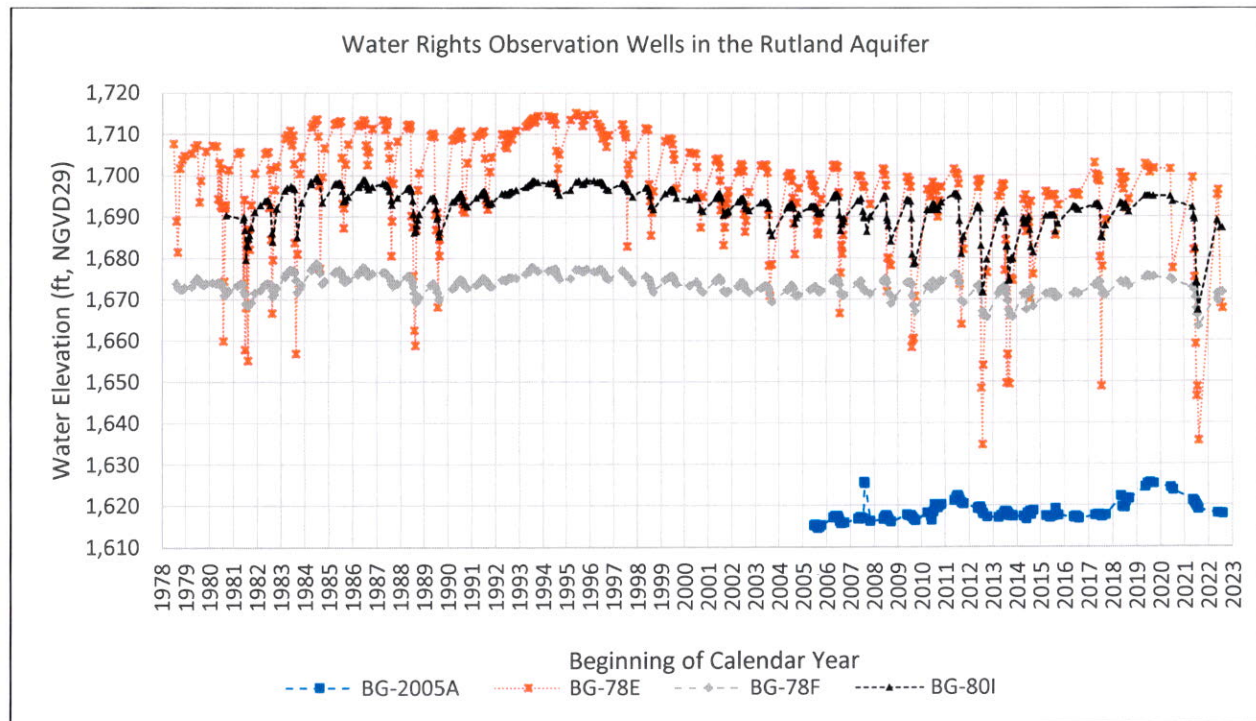


Figure 2: Water elevations of Rutland aquifer observation wells [4]

Potential for Unlawful Impairment of Existing Water Rights

The nearest water rights/permits to this application are Water Right Nos. 6113-3 and 7263-3, located approximately 1.9 miles west of this application. The nearest domestic well likely to be completed into the Rutland aquifer is located approximately 0.6 miles east of this application. 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, a water right/permit causes an 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

In order to place the waters of the state to maximum beneficial use, the Water Management Board concluded in their consideration of Water Permit Application No. 2313-2 for Coca-Cola Bottling Company that hydraulic head in the aquifer would not be protected as a means of water delivery [6]. Some drawdown in the aquifer is likely to occur, which may cause nearby wells to

need to lower their pumps to access water in the aquifer. Lowering pumps is not considered an unlawful impairment of an adequate well. Precise drawdown behavior in an aquifer cannot be known without an aquifer performance test. There is no record of well interference in adequate wells completed into the Rutland aquifer on file with the Water Rights Program [7]. Given the availability of 90 feet of hydraulic head above the top of the aquifer, no record of well interference in the aquifer, and distance from this application to the nearest water rights and domestic wells, there is reasonable probability this application can be developed without an unlawful impairment of existing water rights.

Statutory Limit for Irrigation Diversion Rate

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of 1.0 cfs per 70 acres, or “the equivalent thereof.” The statute does provide 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 irrigation system is a swing-arm, cornering system which requires more flow to operate due to having additional sprinklers. The requested 2.22 cfs is slightly higher (0.08 cfs) than the 1 cfs per 70 acres (2.14 cfs) rate. While the applicant did not provide a reason for the greater rate, this extra flow rate needed to operate an oversize pivot is reasonable for this method of irrigation and has been accepted by the Water Management Board in the past.

Conclusions

1. Water Permit Application No. 8737-3 seeks to appropriate 2.22 cfs from one well completed into the Rutland aquifer located in NW ¼ NE ¼ Section 14 for the irrigation of 150 acres located in NW ¼ Section 14; all in T110N-R48W.
2. Based on the hydrologic budget and record of observation wells, there is reasonable probability unappropriated water is available for this application.
3. There is reasonable probability this application can be developed without unlawful impairment of existing water rights or domestic uses.
4. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres due to the size and partial rotation orientation of the center pivot.



Kimberly C. Drennon, E.I.

Natural Resources Engineer II – DANR Water Rights Program

References

- [1] L. J. Hamilton, "Water Resources of Brookings and Kingsbury Counties, South Dakota," United States Geological Survey, Huron, South Dakota, 1989. Water-Resources Investigations Report 88-4185.
- [2] SD DANR Water Rights Program, "Water right permit file database," SD DANR Water Rights Program, Pierre, South Dakota, 2023.
- [3] SD DANR Water Rights Program, "Irrigation questionnaire summaries," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, SD, 2022.
- [4] SD DANR Water Rights Program, "Observation wells," Pierre, South Dakota, 2023.
- [5] NOAA, "Climate at a Glance - Divisional Time Series for South Dakota Region 7," NOAA, 1 May 2023. [Online]. Available: <https://www.ncdc.noaa.gov/cag/divisional/time-series>. [Accessed 12 May 2023].
- [6] SD Water Management Board, "Findings of Facts, Conclusions of Law and Final Decision in the matter of Water Permit Application No. 2313-2," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 1994.
- [7] SD DANR Water Rights Program, "County files," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2023.



**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 NEWSPAPER RIGHT AWAY.**

May 26, 2023

Joe Davis
20968 482nd Ave
Elkton SD 57026

Dear Mr. Davis:

Water Permit Application No. 8737-3 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 Brookings Register printed at Brookings SD (Ph # 605 692-6271). You will need to contact the newspaper 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 newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Rachel Rodriguez

Rachel Rodriguez
Water Rights Program
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

NOTICE OF APPLICATION NO. 8737-3 to Appropriate Water

Notice is given that Joe Davis, 20968 482nd Avenue, Elkton SD 57026 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second (cfs) from one well to be completed into the Rutland Aquifer (approximately 232 feet deep) located in the NW 1/4 NE 1/4 Section 14 for irrigation of 150 acres located in the NW 1/4 Section 14; all in T110N – R48W. 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 east of Bushnell SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8737-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by June 20, 2023.

The petition shall include a statement describing the unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by June 20, 2023.

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

Published once at the total approximate cost of_

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Thursday, May 25, 2023 4:57 PM
To: registerclassifieds@brookingsregister.com
Subject: 8737-3 Joe Davis - Public Notice
Attachments: 8737-3 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on June 7, 2023.

Joe Davis, 20968 482nd Avenue, Elkton SD 57026, (605 690-6184) 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.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



Affidavit of Publication

State of South Dakota

Exhibit "A"

ss

County of Brookings

Katherine Foiles of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

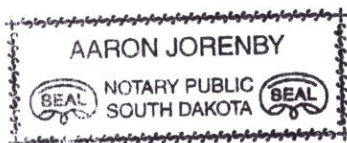
LEG# 24299 NOTICE OF APPLICATION

same was published, is hereto attached marked Exhibit said newspaper for _____ 1 times, to-wit:

June 7, 2023

said Exhibit "A" inures to the sole benefit for the publishers of said newspaper; 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:

Forty dollars and twelve cents \$40.12



Katherine Foiles

23 day of

June

2023

RECEIVED
JUN 15 2023
OFFICE OF
WATER

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires February 22, 2026

Ag

Legal 24299 1X
6/7

**NOTICE OF APPLICATION
NO. 8737-3 TO
APPROPRIATE WATER**

Notice is given that Joe Davis, 20968 482nd Avenue, Elkton SD 57026 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second (cfs) from one well to be completed into the Rutland Aquifer (approximately 232 feet deep) located in the NW 1/4 NE 1/4 Section 14 for irrigation of 150 acres located in the NW 1/4 Section 14; all in T110N - R48W. 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 east of Bushnell SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8737-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at [https://danr.](https://danr.sd.gov/public)

[sd.gov/public](https://danr.sd.gov/public) or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

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tion, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by June 20, 2023.

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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 recommenda-

tion 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 June 7, 2023 at the total approximate cost of \$40.12 and may be viewed free of charge at www.sdpublicnotices.com.

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Thursday, May 25, 2023 4:52 PM
To: davis_jth@hotmail.com
Subject: 8737-3 Joe Davis - Public Notice
Attachments: 8737-3.pdf; 8737-3 public.short_final.docx; 8737-3 APPL.docx

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.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUL 11 2023

Joe Davis
20968 482nd Avenue
Elkton SD 57026

Dear Mr. Davis:

Enclosed is Water Permit No. 8737-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

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

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

**Affidavit of Public Notice
on DANR Website**

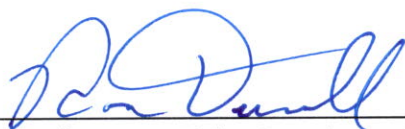
Pursuant to SDCL § 46-2A-4, public notice of the following application was posted on the DANR web site at <https://danr.sd.gov/public>. The posted public notice is the same notice as published in the pertinent newspaper(s) and a copy of the public notice is maintained in the application file. If the application is contested, the posting is moved to the DANR contested case website at <https://danr.sd.gov/public/ContestedCase.aspx> until final action is taken on the application pursuant to SDCL § 46-2A-4.

Application No.: 8737-3

Name of Applicant: Joe Davis

Date of Posting: 6/6/2023

Date of Removal: 7/11/2023



Ron Duvall, Water Rights Permitting Administrator

7/14/23

Date

Subscribed and sworn to before me, a notary public, this 14 day of July, 20 23.



Notary Public - South Dakota
My commission expires:
Rachel Rodriguez
My Commission Expires
May 16, 2029

(SEAL)

