

WATER PERMIT NO. 8648-3

Name of Applicant: **Marquardt Family Limited Partnership**

Address: **PO Box 1040, Yankton SD 57078** Phone:

Amount of Water Claimed: **2.22 cfs** Total Acres: **271 acres**

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

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

Type of Waste Disposal System:

Location: **15 miles northwest of Yankton**

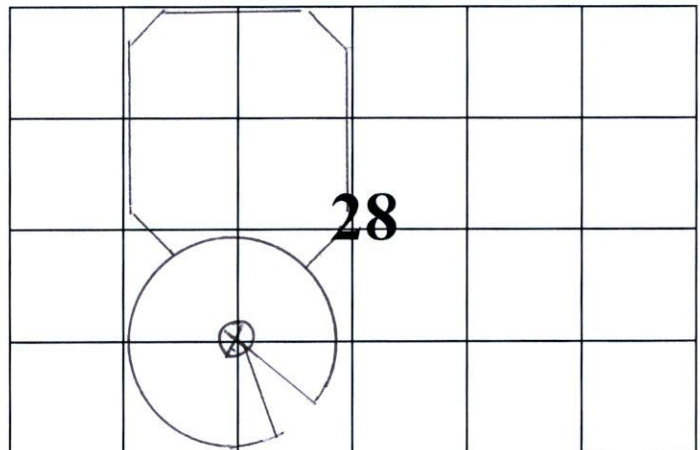
PRIORITY Date Received: **8-3-22** Application/License Fee: **\$1050**

Corrected Application Received: Period of Annual Use: **April 1 – October 31**

Remarks: **Water Permit No. 6980-3 authorizes irrigation of the same land from a different aquifer.**

Diversion Point: **approximate center SW 1/4 Sec**
28-T95N-R57W

Land to be Irrigated: **W 1/2 Sec 28-T57N-R57W**



Depth of Well: **243 feet**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by: **Keith DeJong**

Reviewed and the Number Assigned on: **8-10-22**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8648-3**

Date of first receipt of application August 3, 2022.

Date returned August 10, 2022.

Date of receipt of corrected application August 10, 2022.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8648-3 to Marquardt Family Limited Partnership, c/o Ralph Marquardt, PO Box 1040, Yankton SD 57078 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. 8648-3 appropriates 2.22 cubic feet of water per second from one well completed into the Scotland Management Unit of Lower James Missouri Aquifer (236 feet deep) located in the approximate center of the SW 1/4 Section 28 for irrigation of 281 acres located in the W 1/2 Section 28; all in T95N-R57W. Water Permit No. 6980-3 authorized irrigation of the same acreage from a water source that was not developed. This permit identifies the correct water source and reflects the system as developed. This site is located approximately 15 miles northwest of Yankton SD.
2. The water appropriated shall be used for the purpose of irrigation and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: April 1 – October 31.
4. The date of approval of Permit No. 8648-3 is November 7, 2022.
5. The date from which applicant may claim right is August 3, 2022.
6. 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. 8648-3 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. 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

FEB 17 2023
date



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

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8648-3</u> Hydrologic Unit <u>10160011</u> Basin <u>James River</u> Newspaper <u>Press & Dakotan</u> <u>605-7811</u> (office use only)
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RECEIVED
AUG 3 2022
OFFICE OF
WATER

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.)

An investigation of the project covered under Permit No. 6980-3 found the well to have been drilled into a different aquifer.

1. Name to Appear on Irrigation Permit Marquardt Family Limited Partnership

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

Mailing Address PO Box 1040 Yankton SD 57078
(Address) (City) (State) (Zip Code)

Phone _____ Mobile _____ Email davehe@marqcompanies.com

2. Amount of water claimed 2.22 *CFS or 1,000 **GPM _____ ***AF Total Acreage 271
(*Cubic Feet per Second) (**Gallons per Minute) (***) Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply one well - Scotland Management Unit of Lower James Missouri Aquifer

4. Location of point of diversion (N 1/2 SW 1/4) or approximate center of SW 1/4 Section 28, T95N, R57W
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Yankton

5. County or counties where water will be used Yankton

6. Annual period during which water is to be used April 1 - October 31

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

Land Description	Acres	Land Description	Acres
NW 1/4 Section 28, T95N, R57W	150		
SW 1/4 Section 28, T95N, R57W	<u>42+1/31</u> (see letter dated 10/12/22)		

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

Water Permit No. 6980-3 authorizes irrigation of the W 1/2 Section 28, T95N, R57W from the Lesterville Aquifer. An investigation of the water use system found the well was drilled deeper into the Lower James Missouri:Scotland Aquifer.

I, Ralph Marquardt, Partner, 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 _____

Permit # 2232B-3

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 _____ Property owned by others _____

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

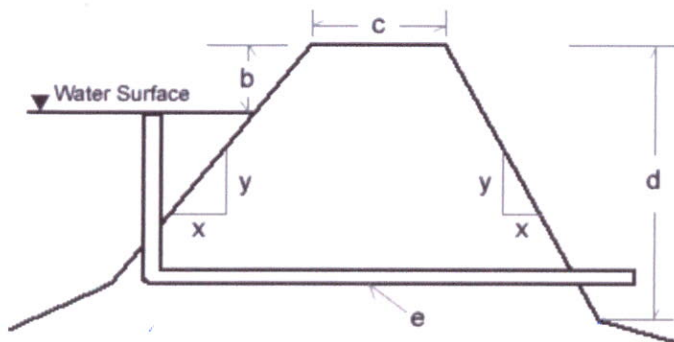
Upstream _____

Downstream _____

h) Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable)

☐ Drilling new well(s) ☒ Using existing well(s)

a) If new wells, how many _____ Have test holes been drilled? ☐ Yes ☐ No Drilled by _____

(if yes, please provide copies of logs)

b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by Hammond Wetmore Drilling

For either existing or proposed wells:

c) Well Depth (required) 243 Depth to Top of Water Bearing Material _____ Depth to Water from Surface 56

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) _____

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c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

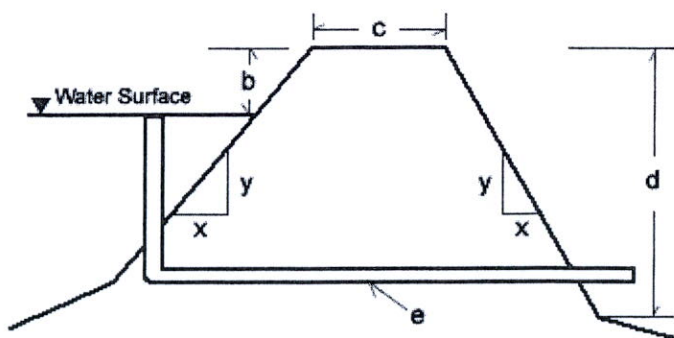
Upstream _____

Downstream _____

h) Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

8648-3
6980-3Location ne 1/4 sw 1/4 Sec 28 Twp 95n Rg 57w

County

Yankton

North

Please mark well
location with an "X"

W

E

Well Completion Date

5/1/2008

1 Mile

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? 300.0 ft. from abandoned well (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Direct rotary

CASING DATA:

If other describe

☐ Steel ☒ Plastic ☐ Other
 PIPEWEIGHT DIAMETER FROM TO HOLE DIAMETER
 LB/FT 16.00 IN 0.0 FT 181.0 FT 22.00 IN

 LB/FT IN FT FT IN
 LB/FT IN FT FT IN

GROUTING DATA:

 Grout Type No. of Sacks Grout Weight From To
 bent grout 37 9.4 Lb/gal 0.0 Ft 175.0 Ft
 Lb/gal Ft Ft
Describe grouting procedure
tremie

SCREEN:

☒ Perforated pipe ☐ Manufactured
 Diameter 16.00 Inches Length 55.0 Feet

Material PVC

Slot Size .060 Set From 181.0 Feet to 236.0 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? hth tablets

☐ No, Why Not?
 Lab sample sent to for
 water quality analysis

Well Owner: Ralph Marquardt

Business Name:

Address: 1317 Golf View Lane

City, State, Zip: Yankton SD 57078

WELL LOG:

DEPTH

FORMATION	FROM	TO
Clay, Yellow brn, silty	0	41
silt, gray, clayey, some sand stringers	41	82
Sand, fine, silty	82	122
Silt, gray, clayey	122	180
Sand, med to coarse, cemented	180	221
gravel, fine to med grained, sandy	221	237
shale, dark gray	237	243

STATIC WATER LEVEL 56.0 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:
☐ Bailed
☐ Other

Pumping Level Below Land Surface

Ft. After Hrs. pumped GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

RECEIVED

FEB - 2 2009

WATER RIGHTS
PROGRAM

This well was drilled under license # 666

And this report is true and accurate.

Drilling firm: Hammond Wetmore Drilling

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 12/10/08

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date August 10, 2022

RECEIVED OF Marquardt Farms General Partnership PO Box 1040 Yankton SD 57078

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

Fee for Application for Permit No. <u>8648-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>1050.00</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>8648-3</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

*License fee paid under
Permit No. 6980-3 is
applied towards this
permit.*

MARQUARDT FAMILY LIMITED PARTNERSHIP
PO BOX 1040
YANKTON, SOUTH DAKOTA 57078

October 12, 2022

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

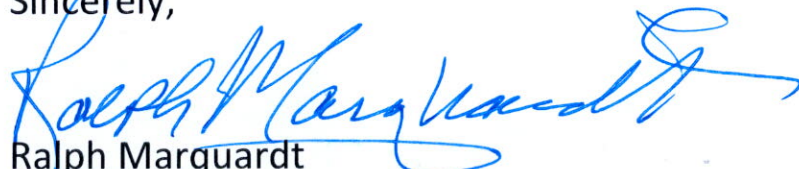
Re: Water Permit No. 6980-3
Application Amendment

Karen.

As you discussed with Dave Husby yesterday, we are adding approximately 10 acres of farmable ground to the W1/2 of Section 28-95-57 with the removal of some trees to allow the irrigator on that property to make a full 360 degree swing. I would request that you allow us to make an amendment to Water Permit No. 6980-3 to add those acres to the ground that is subject to the irrigation permit.

Please let us know if you need additional information from us as it relates to this request. Thank you for your kind assistance in this matter.

Sincerely,



Ralph Marquardt
General Partner

RECEIVED

OCT 14 2022

OFFICE OF
WATER

Schlaak, Karen

From: Dave Husby <Daveh@marqcompanies.com>
Sent: Tuesday, October 11, 2022 4:39 PM
To: Schlaak, Karen
Subject: RE: [EXT] Irrigation Permit in 28-95-57

I will get the info to you as soon as I have it.

From: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Sent: Tuesday, October 11, 2022 2:12 PM
To: Dave Husby <Daveh@marqcompanies.com>
Subject: RE: Irrigation Permit in 28-95-57

Dave,
The Water Rights Program has no problem with the removal of trees. Please call me regarding the irrigation of additional acres. 605 773-5596
Karen

From: Dave Husby <Daveh@marqcompanies.com>
Sent: Tuesday, October 11, 2022 11:56 AM
To: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: [EXT] Irrigation Permit in 28-95-57

Karen. We have one or two permits for the W ½ of this section in Yankton County. At the southeast corner of the property, we have two 1200 unit hog barns that were built at or around 2000. This was built before any zoning requirements and such does not have nor does it need a Conditional Use Permit.

We are looking at taking some trees out of the NW corner of the hog yard so that the pivot can turn a full 360 degrees without having to backtrack. I have confirmed that we have no issue with Yankton County Planning. However, out of courtesy and proper protocol, I am reaching out to you to make sure there are no DANR concerns with what we are doing. We will not be irrigating more ground per se, as the hog unit stays intact. There will be no significant additions to the land irrigated other than where we remove a few trees to allow for the pivot to go around.

Please let me know if you have any concerns. I was informed just about an hour ago that the tree removal would probably start after lunch so I opted to contact your office to make sure we were not creating any issue that should be addressed upfront. Please check into my request/concern and get back to me as soon as you can. Thank you.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

August 3, 2022

Dave Husby
Marquardt Farms
PO Box 1040
Yankton SD 57078

Dear Mr. Husby:

I am writing in follow-up to our phone conversation concerning the field investigations conducted for Water Permit Nos. 6980-3, 7213-3 and 7801-3 for Marquardt Farms. The inspections found acreage and diversion rate not covered or out of the permitted area.

Enclosed are three partially completed water permit applications for your review and completion.

1. A new permit is needed for the entire project because the well was drilled deeper and into a different aquifer than what was authorized under Permit No. 6980-3. Application fee is \$1,050
2. A new permit is needed for the additional diversion rate, additional acreage, including acreage developed outside of the permitted area under No. 7213-3. Application fee is \$850
3. A new permit is needed for additional diversion rate and acreage developed under Water Permit No. 7801-3. Application fee is \$500

The completed applications and the fees are all that is needed to begin processing the new permits. The total application fee for the three new permits would be \$2,400.

If I can answer any questions for you, please let me know.

Sincerely,

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

enclosures

August 8, 2022

Genny McMath
Water Rights Program
DANR
Joe Foss Building
523 E. Capitol Ave
Pierre, SD 57501-3182

RECEIVED

AUG 10 2022

OFFICE OF
WATER

PAID

AUG 10 2022

Ck#

13353

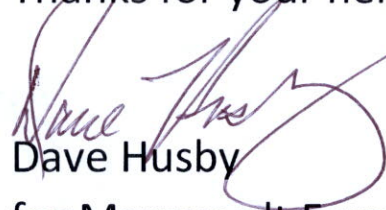
Rec't#

Genny.

Here is the fee for the 3 Irrigation permit updates. I emailed the forms to you in advance with this check to follow.

Please let me know what if anything else you may need.

Thanks for your help and guidance.



Dave Husby

for Marquardt Farms Partnership

Schlaak, Karen

From: Dave Husby <Daveh@marqcompanies.com>
Sent: Wednesday, August 10, 2022 2:46 PM
To: Schlaak, Karen
Subject: RE: [EXT] the 3 applications

I am relooking at the applications and appreciate your observation. Here is how I think they should be permitted:

SE1/4 of Section 21-93-53 in Clay County (Permit 7801-3)

Marquardt Farms General Partnership

W1/2 of Section 28-95-57 in Yankton County (Permit 6980-3)

Marquardt Family Limited Partnership

(MFLP)

Section 6-94-55 in Yankton County (Permit 7213-3)

Marquardt Family Limited Partnership

(MFLP)

Ralph Marquardt is the General Partner of all entities. The permit under the General Partnership is not on land owned by Ralph, but the well and irrigation are his under a lease held by Marquardt Farms General Partnership. The other two (MFLP) are based on the ownership of the land. Any confusion created was by me and no one else. I visited with our accountant and he asked that it be done in this fashion for tax and other reasons. Do you need a new application from us as the signature will be Ralph irrespective of these entities?

From: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Sent: Wednesday, August 10, 2022 2:16 PM
To: Dave Husby <Daveh@marqcompanies.com>
Subject: the 3 applications

Dave,
Each application has a different name. Just checking to make sure the name is correct or if need be - changed so they are all the same. Genny said she didn't know that is why she left them blank on the application forms.

Marquardt Family Limited Partnership - this is listed on the Secretary of State's website
Marquardt Farms General Partnership
Marquardt Farms Partnership

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. 8648-3, Marquardt Family Limited Partnership**

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. 8648-3, Marquardt Family Limited Partnership, PO Box 1040, Yankton SD 57078.

The Chief Engineer is recommending APPROVAL of Application No. 8648-3 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. 8648-3 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. 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
October 7, 2022

**Report to the Chief Engineer on
Water Permit application No. 8648-3**

Marquardt Family Limited Partnership
23 September 2022

Water Permit Application No. 8648-3 seeks to appropriate 2.22 cubic feet of water per second (cfs) from one well completed into the Lower James-Missouri: Scotland aquifer in the approximate center of the SW ¼ Section 28 for irrigation of 281 acres located in the W ½ Section 28; all in T95N-R57W, 5th Principal Meridian. Water Permit No. 6980-3 authorized irrigation of 271 acres in the W ½ Section 28 T95N-R57W from a water source that was not developed. This application identifies the correct water source and reflects the system as developed. The applicant is requesting to irrigate 10 acres more than they had previously been irrigating, in the same fields as previously identified. This site is located approximately 15 miles northwest of Yankton.

Aquifer: Lower James-Missouri: Scotland (LJM:S)

Hydrogeologic Characteristics

The Lower James-Missouri: Scotland aquifer management unit is a sand and gravel outwash underlying approximately 72,800 acres of Bon Homme, Hutchinson, and Yankton Counties that was deposited in the Quaternary Period [1]. It has a strong hydrologic connection to the main body of the Lower James-Missouri aquifer to the northeast and the Choteau: Tyndall aquifer management unit to the west and may have some hydrologic contact with the Codell Sandstone aquifer where the Lower James-Missouri: Scotland aquifer management unit contacts the underlying and adjacent portions of the Codell Sandstone aquifer [2] [3].

The applicant submitted a well completion report for the production well, completed on May 1, 2008. The driller reported encountering medium to coarse cemented sand from 180 to 221 feet below grade, sandy, fine- to medium-grained gravel from 221 to 237 feet below grade, and dark grey shale from 237 to 243 feet below grade. The driller placed screen from 181 to 236 feet below grade. The static water level of the well at the time of completion was 56 feet below grade. The depths of aquifer materials encountered are consistent with nearby DANR observation wells completed into the Lower James-Missouri: Scotland aquifer management unit [4]. The Lower James-Missouri Scotland aquifer management unit is under buried, confined conditions. At the time the well for this application was completed, the hydraulic head in the aquifer rose 124 feet above the top of the water bearing formation (i.e. the cemented sand at 180 feet below grade).

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 provides that the Water Management Board is not required to consider the balance of recharge and withdrawals if the application is for a water distribution system and the groundwater source is older or stratigraphically lower than the Greenhorn Formation. This application is not for a water distribution system and the Lower James-Missouri: Scotland aquifer management unit is younger and stratigraphically higher than the Greenhorn Formation. Therefore, the Water Management Board is required to find that average annual recharge exceeds average annual withdrawals to approve this application.

Availability of Water

Hydrologic Budget

Recharge

Recharge to the Lower James-Missouri: Scotland aquifer management unit is by infiltration of precipitation and possibly by groundwater inflow from bedrock and glacial aquifers when they are in contact with the aquifer management unit and their hydraulic head is higher than the hydraulic head of the Lower James-Missouri: Scotland aquifer management unit. Hedges, Allen, and Holly [5] used a flow-net analysis to estimate an average annual recharge to the entire Lower James-Missouri aquifer to be approximately 1.5 inches per year. The validity of a flow-net analysis depends on the validity of its assumptions. Hedges, Allen, and Holly also recommended using a recharge rate ranging between 0.15 and 0.60 inches per year for buried, confined aquifers for water management purposes. By applying the various recharge rates over the estimated area of the aquifer (72,800 acres), the total average annual recharge can be estimated. Using the recharge rate from the flow-net analysis, the estimated average annual recharge could be as much as 9,100 ac-ft/yr. Using the more conservative recommended values, the average annual recharge to the Lower James-Missouri: Scotland aquifer management unit could range between 910 and 3,640 ac-ft/yr.

Discharge

Discharge from the Lower James-Missouri Scotland aquifer management unit is likely by groundwater outflow to bedrock and glacial aquifers where they contact the Scotland management unit and the hydraulic head in the other aquifers is lower than the hydraulic head of the Lower James-Missouri: Scotland aquifer management unit, by evapotranspiration where the aquifer is at or near land surface, and by domestic and appropriative well withdrawals. There are 18 water rights/permits authorized to withdraw from the Lower James-Missouri: Scotland aquifer management unit. Of those authorized, 17 are for irrigation and 1 is for livestock watering use in an animal feeding operation [6]. Assuming the one water right authorized for livestock watering use in a livestock feeding operation pumps at its maximum withdrawal rate 60% of the time, it is estimated to withdraw approximately 48 ac-ft/yr. Figure 1 shows the reported irrigation withdrawals from the Lower James-Missouri: Scotland aquifer management unit and under Water Permit No. 6980-3 [7].

Irrigation Reported in Lower James-Missouri: South (1979 - 2021) and under Permit No. 6980-3 (2008 - 2021)

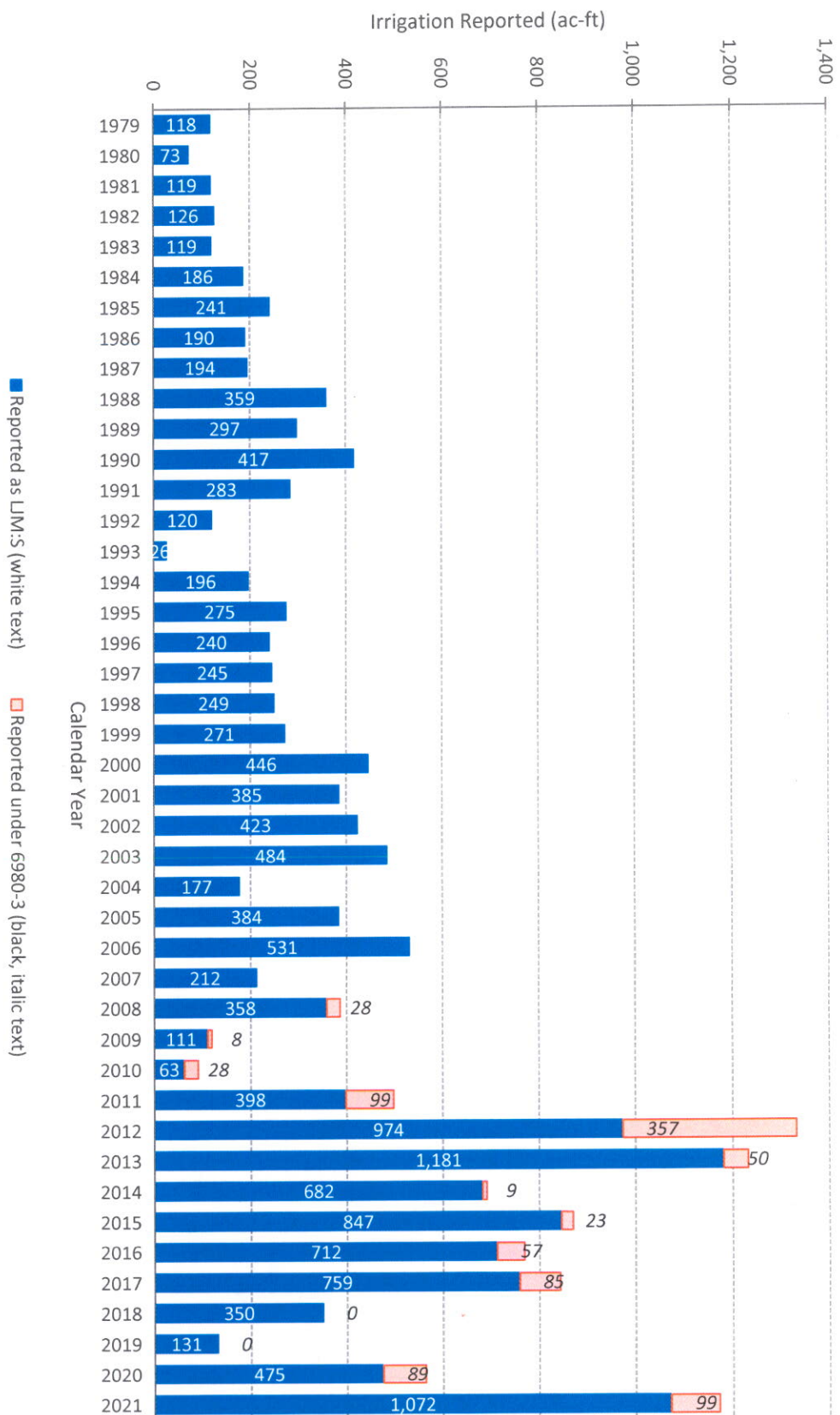


Figure 1: Irrigation reported in Lower James-Missouri: Scotland aquifer management unit from 1979 - 2021 and under Permit No. 6980-3 from 2008 - 2021 [7]

The average irrigation use reported over the entire period of record (1979 – 2021) is 361 ac-ft/yr [7]. However, due to changes in farming practice and an increase in the number of permits from 10 to 16 from 2012 to 2013, the average over the entire period of record may not be an accurate reflection of actual average annual withdrawal at the present time. The average irrigation reported as withdrawing from the Lower James-Missouri: Scotland aquifer management unit over the last 10 years of record (2012 – 2021) is 718 ac-ft/yr [7], excluding withdrawals under this application, as they were incorrectly reported as withdrawing from another aquifer. One irrigation permit, No. 8571-3, is new enough that its withdrawals are not reflected in the record of irrigation reported. That permit is authorized to irrigate 121 acres [6]. If Water Permit No. 8571-3 irrigates 10 inches per acre per year, it will withdraw 101 ac-ft/yr. The true average annual withdrawal under Water Permit No. 8571-3 is likely to be less, based on Water Rights Staff experience. However, that value will be used to estimate withdrawals under Water Permit No. 8571-3 until its withdrawals are reflected in the irrigation questionnaire summaries. The applicant has been reporting their withdrawals since 2008 under Water Permit No. 6980-3. The average irrigation reported over the entire period of record under Water Permit No. 6980-3 (2008 – 2021) was 67 ac-ft/yr. The average irrigation reported over the last 10 years of record (2012 – 2021) was 77 ac-ft/yr [7]. At the rate of 77 acre-feet per year for the 271 acres authorized under Water Permit No. 6980-3, the applicant irrigated at a rate of approximately 3.4 inches per year per permitted acre. If the applicant irrigates at the same average annual rate per permitted acre for the 281 acres requested, the applicant would irrigate on average approximately 80 ac-ft/yr, an addition of 3 ac-ft/yr of estimated average annual withdrawal. The average irrigation reported over the last 10 years of record will be used both for irrigation reported in the aquifer management unit and irrigation reported under Water Permit No. 6980-3.

Summary of Hydrologic Budget

Average annual recharge to the Lower James-Missouri: Scotland aquifer management unit ranges from 910 ac-ft/yr to 3,640 ac-ft/yr using the method recommended by Hedges, Allen, and Holly and could be as great as 9,100 ac-ft/yr [5]. Table 1 summarizes average annual withdrawals from the aquifer management unit below, including average annual withdrawals for this application [6] [7]. Including withdrawals for this application, the total estimated average annual withdrawal from the Lower James-Missouri: Scotland aquifer management unit is 947 ac-ft/yr. Based on the hydrologic budget, there is reasonable probability unappropriated water is available for this application.

Table 1: Summary of withdrawals from the aquifer management unit [6] [7]

Type	Number	Est. Avg. Annual Use (ac-ft/yr)
Irrigation, Reporting	16	718
Irrigation, too new to report	1	101
Non-irrigation	1	48
Subtotal, authorized to withdraw	18	867
Future Use	0	0
This application under 6980-3	1	77
Ten additional acres under this application	1	3
Grand total	19	947

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 that recharge will exceed withdrawals in an aquifer to approve an application. The Water Rights Program maintains 18 observation wells completed into the Lower James-Missouri: Scotland aquifer management unit. The nearest Lower James-Missouri: Scotland observation well to this application is Observation Well YA-77A, located approximately 1.7 miles east of this application [4]. Another observation well, named YA-79B, is located approximately 2.2 miles west of this application. Figure 2 shows observation well water levels for Observation Wells YA-77A and YA-79B [4]. In general, water levels rise during periods of higher-than-average precipitation and decline during periods of lower-than-average precipitation. Seasonal withdrawals are also reflected for summer water levels, especially in Observation well YA-77A. The elevation of the top of the aquifer at YA-79B is approximately 1,125 ft above NGVD29 and the elevation of the top of the aquifer at YA-77A is approximately 1,106 ft above NGVD29 [8]. Water levels in wells completed into confined aquifers are not reflections of available water, but of the hydraulic head in the aquifer. At the lowest measurement on record in Observation Well YA-77A, the hydraulic head in the aquifer rises 182 feet above the formation [4] [8]. The water requested by application has actually been in use since 2008 and withdrawals under this application are therefore reflected in the observation well record. The additional annual withdrawal due to irrigation of the 10 additional acres requested is not likely to create a noticeable impact on observation well water levels. Water level fluctuations are dominated by the influence of climate, meaning water is naturally discharging from the aquifer. The Water Management Board considers natural discharge to be available for capture. Therefore, based on observation well record, there is reasonable probability unappropriated water is available for this application.

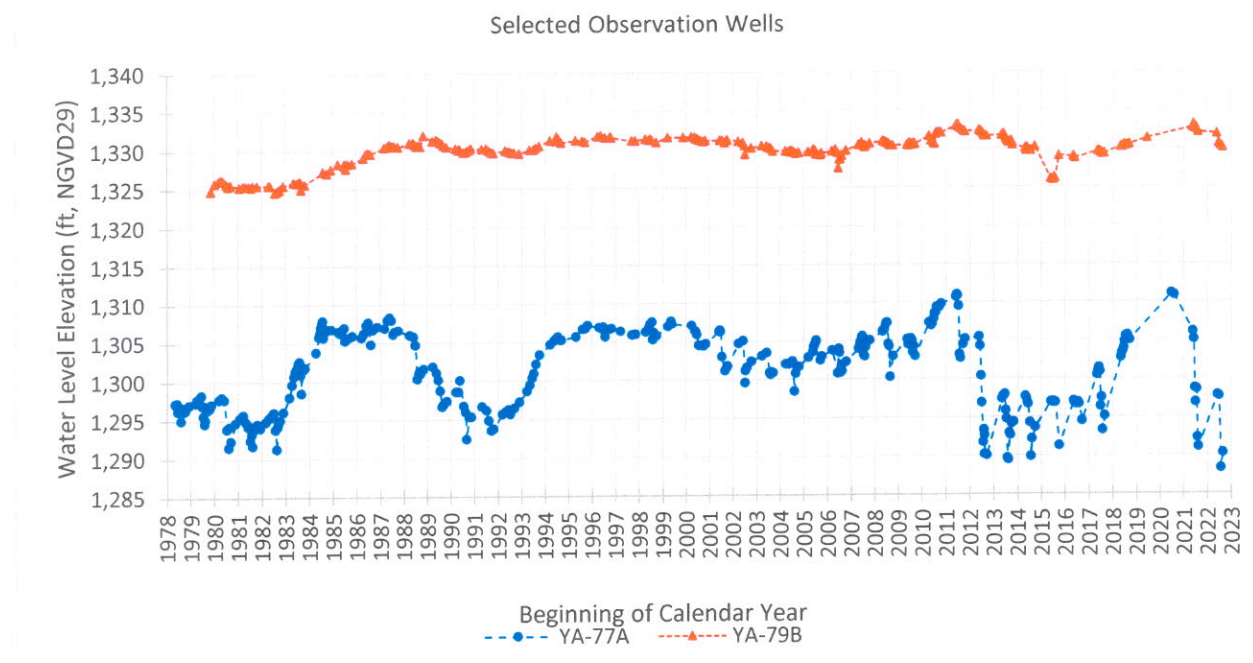


Figure 2: Observation well water levels [4]

Possibility of Unlawful Impairment of Existing Water Rights

The nearest water right/permit to this application in the same aquifer is Water Right No. 7831-3, located approximately 1.4 miles east of this application [6]. The nearest domestic well on file with the Water Rights Program that is likely to be in the same aquifer is located approximately 0.9 miles west of this application [9]. 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

Some drawdown due to this application likely has occurred, and a small amount of additional drawdown may occur due to the additional withdrawals to irrigate 10 additional acres. There are no complaints on file with the Water Rights Program in Yankton County regarding adversely impacted adequate wells in this aquifer [10]. Therefore, based on the lack of complaints, presence of approximately 180 feet of hydraulic head above the top of the aquifer during the lowest measurement in a nearby observation well, and given that this application has already been in use without complaints, there is reasonable probability this application can be developed without unlawful impairment of existing rights. However, out of an abundance of caution, a qualification should be added to the permit requiring the applicant to control their withdrawals such that senior water rights/permits holders and all domestic wells with adequate wells can access needed water.

Conclusions

1. Water Permit Application No. 8648-3 seeks to appropriate 2.22 cfs from one well completed into the Lower James Missouri: Scotland aquifer in the approximate center of the SW $\frac{1}{4}$ Section 28 for irrigation of 281 acres located in the W $\frac{1}{2}$ Section 28; all in T95N-R57W.
2. Water Permit No. 6980-3 authorized irrigation of 271 acres in the W $\frac{1}{2}$ Section 28 T95N-R57W from a water source that was not developed. This application identifies the correct water source and reflects the system as developed plus an additional 10 acres.
3. Based on the hydrologic budget and observation well analysis, there is reasonable probability unappropriated water is available for this application.
4. There is reasonable probability this application can be developed without unlawful impairment of existing water rights.

 10/14/2022

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

References

- [1] 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.
- [2] C. M. Christensen, "Geology and water resources of Bon Homme County, South Dakota; Part I: Geology," SD DANR Geological Survey Program, Vermillion, South Dakota, 1974. Bulletin 21 (Part 1).
- [3] E. F. Bugliosi, "Major aquifers in Yankton County, South Dakota," SD DENR Geological Survey Program, Vermillion, South Dakota, 1983. Information Pamphlet No. 28.
- [4] SD DANR Water Rights Program, "Observation wells," Pierre, South Dakota, 2022.
- [5] L. S. Hedges, J. Allen and D. E. Holly, "Evaluation of ground-water resources eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa; Task 7: Ground Water Recharge," U.S. Army Corps of Engineers, Omaha, Nebraska, 1985.
- [6] SD DANR Water Rights Program, "Water right permit file database," SD DANR Water Rights Program, Pierre, South Dakota, 2022.
- [7] SD DANR Water Rights Program, "Irrigation questionnaire summaries," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, SD, 2021.
- [8] SD Geological Survey, "Lithologic logs," Vermillion, South Dakota, 2020.
- [9] SD DANR Water Rights Program, "Well completion reports," Pierre, South Dakota, 2022.
- [10] SD DANR Water Rights Program, "County files," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2022.

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

DAVE HUSBY
PO BOX 1040
YANKTON SD 57078

RECEIVED

OCT 31 2022

OFFICE OF
WATER

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

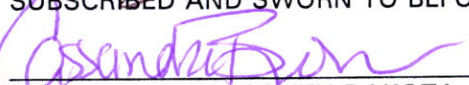
KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND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

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 26th DAY OF October, 2022
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$42.24 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: 10/26/2022

FILED ON: 10/26/2022


SUBSCRIBED AND SWORN TO BEFORE ME THIS 26th DAY OF October, 2022


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

Notice is given that Marquardt Family Limited Partnership, c/o Ralph Marquardt, PO Box 1040, Yankton SD 57078 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second from one well completed into the Scotland Management Unit of Lower James Missouri Aquifer (236 feet deep) located in the approximate center of the SW 1/4 Section 28 for irrigation of 281 acres located in the W 1/2 Section 28; all in T95N-R57W. Water Permit No. 6980-3 authorized irrigation of the same acreage from a water source that was not developed. This application identifies the correct water source and requests the system as developed. This site is located approximately 15 miles northwest of Yankton SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8648-3 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 November 7, 2022.

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 November 7, 2022.

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 \$42.24 and can be viewed free of charge at www.sdpublicnotices.com

Published October 26, 2022.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, October 18, 2022 8:42 AM
To: Cassandra Brockmoller (cassandra@yankton.net)
Subject: 8648-3. Marquardt Family Limited Partnership
Attachments: 8648-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on October 26,2022.

Dave Husby, PO Box 1040, Yankton SD 57078 (605 310-9801) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

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





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

October 18, 2022

Marquardt Family Limited Partnership
Ralph Marquardt
PO Box 1040
Yankton SD 57078

Dear Mr. Marquardt:

Water Permit Application No. 8648-3 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 Press & Dakotan printed at Yankton SD (Ph # 605 665-7811). 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,

Karen Schlaak

Karen Schlaak
Water Rights Program
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8648-3 to Appropriate Water

Notice is given that Marquardt Family Limited Partnership, c/o Ralph Marquardt, PO Box 1040, Yankton SD 57078 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second from one well completed into the Scotland Management Unit of Lower James Missouri Aquifer (236 feet deep) located in the approximate center of the SW 1/4 Section 28 for irrigation of 281 acres located in the W 1/2 Section 28; all in T95N-R57W. Water Permit No. 6980-3 authorized irrigation of the same acreage from a water source that was not developed. This application identifies the correct water source and requests the system as developed. This site is located approximately 15 miles northwest of Yankton SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8648-3 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 November 7, 2022.

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 November 7, 2022.

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

Published once at the total approximate cost of_

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, October 18, 2022 8:46 AM
To: Dave Husby
Subject: Water Permit Application No. 8648-3
Attachments: 4231.pdf

Dave,

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 as soon as possible to authorize publication and arrange for payment. This information is being mailed to Ralph Marquart today.

This is the permit where the 10 additional acres have been added due to the removal of the tree grove.

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



**Report of Examination of Works and/or Application of Water to Beneficial Use
For Permit No. 6980-3 (8648-3)**

I have this day, March 17, 2022, made a thorough examination of the water use system constructed by Marquardt Farms, PO Box 1040, Yankton, SD 57078, holder of Permit No. 6980-3, bearing the priority of February 19, 2008, authorizing the diversion of 2.22 cu. ft. per second of the waters of groundwater (Lesterville Aquifer)** for the irrigation of 271.5 acres located in Yankton County.

Inspection contacts: Dave Husby, Breyton Nelson and Jason Fisher

**** The system as developed, diverts water from the Lower James Missouri – Scotland Aquifer rather than the permitted Lesterville Aquifer. The Lesterville Aquifer was not developed. Permit No. 6980-3 will be scheduled for cancellation. The following is the system as developed (permitted under No. 8648-3):**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Hammond Wetmore Drilling
- 2) No. of Wells: 1
- 3) Depth(s): 243 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 16 inches
- 2) Length: 181 feet
- 3) Type: Plastic

Screen:

- 1) Diameter: 16 inches
- 2) Length: 55 feet
- 3) Type: PVC
- 4) Static water level: 56 feet

Pump:

- 1) Make: Unknown
- 2) Model: Unknown
- 3) Capacity: 1,000 gpm

Motor:

- 1) Make: Hydroflo VHS Motors
- 2) Model No.: VHS326TP-4-050S
- 3) Horsepower rating: 50 hp

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

- | | | |
|--------------------------|--------------------------|---|
| 1) Type: <u>Aluminum</u> | 2) Size: <u>8</u> inches | 3) Length: <u>20 feet to the south pivot</u> |
| 1) Type: <u>PVC</u> | 2) Size: <u>8</u> inches | 3) Length: <u>2,560 feet to the north pivot</u> |

C. Works used to apply water to beneficial use:

South Center Pivot:

- 1) Make: Valley
- 2) Overall length: 1,298 feet
- 3) Number of towers: 7
- 4) End gun: Yes
- 5) Capacity: 1,000 gpm

North Center Pivot:

- 1) Make: Zimmatic
- 2) Overall length: 1,555 feet
- 3) Number of towers: 8
- 4) End gun: Yes
- 5) Capacity: 900 gpm

Chemigation Equipment:

- 1) Does chemigate: Yes
- 2) Main line check valve: Yes
- 3) Inspection port/air relief: Yes
- 4) Low pressure drain: Yes
- 5) Discharge is 20' from source: No
- 6) Interlock type: Electrical
- 7) Injection pump: Positive Displacement
- 8) Injection check valve: Yes
- 9) Injection line check valve or positive displacement pump: Yes

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by: No
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period: Yes
- 3) Exceptions to compliance are: The well appears to be drilled into the wrong aquifer (Permit No. 8648-3 was obtained for the aquifer as developed into the Lower James Missouri-Scotland).

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows:
The well is 1,320 feet east and 1,350 feet north of the southwest corner of Section 28-T95N-R57W (Latitude 43.01398, Longitude -97.59131 – N1/2 of the SW1/4).
2. The works are capable of diverting and conveying to the place of use 2.22 cu. ft. per second of water which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows:

All in Section 28-T95N-R57W

<u>NW1/4NW1/4</u>	<u>36 acres</u>	<u>NW1/4SW1/4</u>	<u>34 acres</u>
<u>NE1/4NW1/4</u>	<u>38 acres</u>	<u>NE1/4SW1/4</u>	<u>35 acres</u>
<u>SW1/4NW1/4</u>	<u>37 acres</u>	<u>SW1/4SW1/4</u>	<u>31 acres</u>
<u>SE1/4NW1/4</u>	<u>39 acres</u>	<u>SE1/4SW1/4</u>	<u>31 acres</u>

comprising a total of 281 acres of land and the license should be issued for 2.22 cfs.

(the SE ¼ SW ¼ originally had 21 acres. The shelter belt was removed allowing another 10 acres to be irrigated)

3. All structures, wells and lands on map: Yes

F. Comments or other permit(s) associated with the project: Two wells were originally authorized under No. 6980-3. The only well drilled was drilled into a different water source (authorized by 8648-3) The pump did not have a rating plate on it and I was not able to obtain any pump information from the well driller or from Marquardt Farms. However, the south pivot chart indicated that it was rated for 1,000 gpm and the north pivot chart indicated that it was rated for 900 gpm. Thus, I am using a pump flow of 1,000 gpm (2.22 cfs). The electric motor did have a plate and

that information is indicated in this report. The chemigation pumping equipment was not on sight, but it was described to me. There was not a discharge hose on site either.



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

Date report completed: April 19, 2022

Notes:

- The original Water Permit No. 6980-3 will be scheduled for cancellation.
- Water Permit No. 8648-3 is being licensed in its place and describes the system as found during the inspection. Keith DeJong's inspection report was modified to describe what happened. A priority date of August 3, 2022, as established under No. 8648-3, is retained for the entire project.

Genny McMath
1-24-2023

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8648-3

(1) Marquardt Family Limited Partnership, c/o Ralph Marquardt, PO Box 1040, Yankton SD 57078 made Application No. 8648-3, August 3, 2022 for a water permit to divert 2.22 cubic feet of water per second from groundwater (Scotland Management Unit of the Lower James Missouri Aquifer), Yankton County, South Dakota for irrigation purposes. Permit No. 8648-3, with a priority date of August 3, 2022 was approved November 7, 2022 and issued to the applicant for diversion of water with construction of the described water supply system and application to beneficial use completed.

(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 2.22 cubic feet of water per second for beneficial use. The location of the diversion point is: 1,320'E and 1,350'N of the SW corner of Section 28-T95N-R57W (approximate center of SW 1/4) Latitude 43.01398 Longitude -97.59131.

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

Section 28-T95N-57W			
NW 1/4 NW 1/4	36 acres	NW 1/4 SW 1/4	34 acres
NE 1/4 NW 1/4	38 acres	NE 1/4 SW 1/4	35 acres
SW 1/4 NW 1/4	37 acres	SW 1/4 SW 1/4	31 acres
SE 1/4 NW 1/4	39 acres	SE 1/4 SW 1/4	31 acres
Total 281 acres			

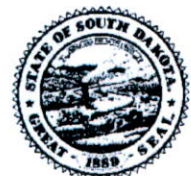
(4) Pursuant to South Dakota Water Law 46-5-30.1 Marquardt Family Limited Partnership, c/o Ralph Marquardt, PO Box 1040, Yankton SD 57078 the holder and/or owner of Water Right No. 8649-3 is issued a license to appropriate water, the right to use 2.22 cubic feet of water per second from groundwater (Scotland Management Unit of the Lower James Missouri Aquifer) with a priority date of August 3, 2022 from the location specified in (2) of this license for irrigation purposes.

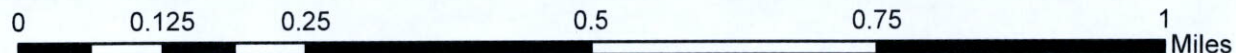
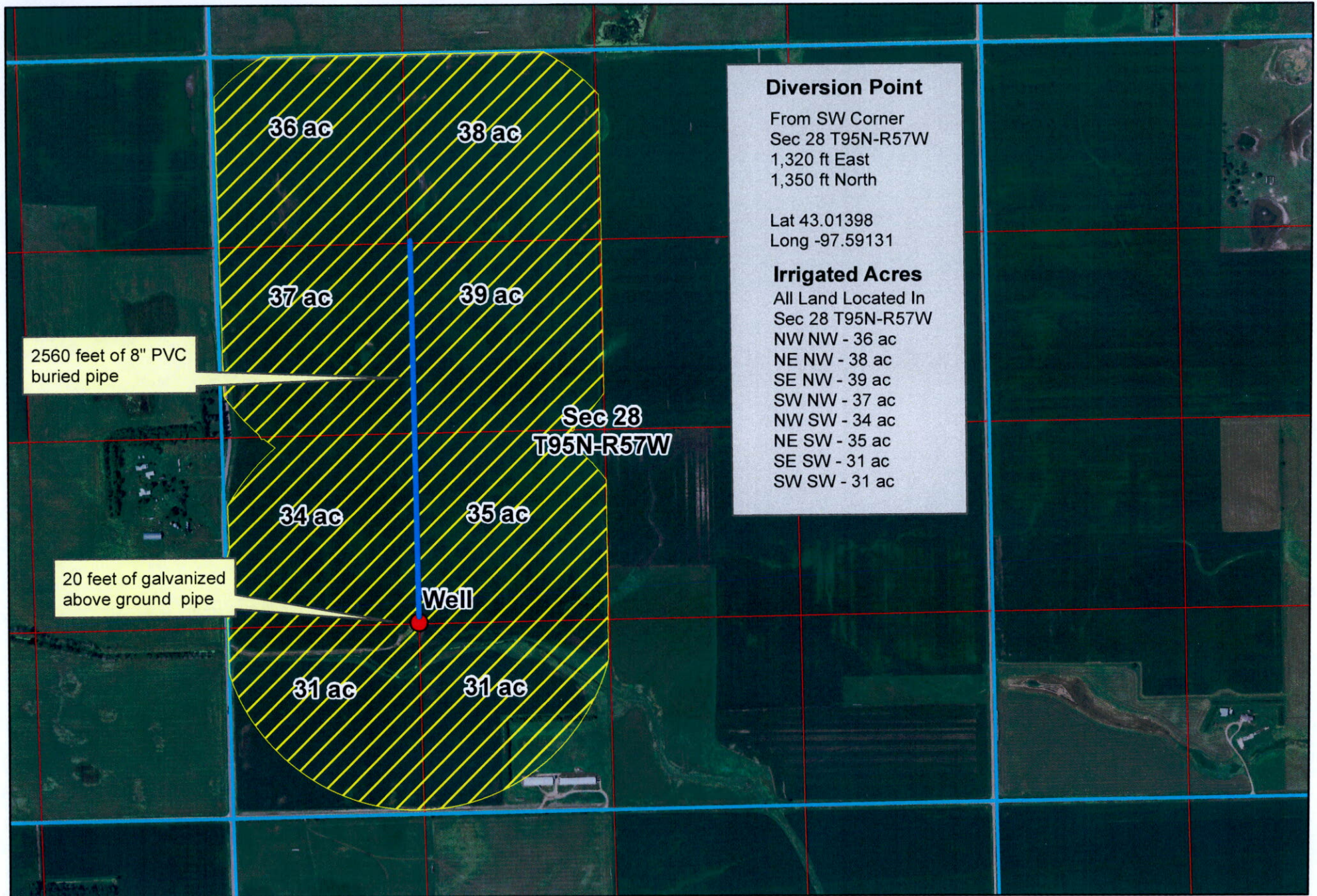
This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8648-3 and subject to the following qualifications:

- The well approved under Water Permit 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.
- 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

FEB 17 2023
date





Keith DeJong
Water Rights Inspector
January 25, 2023



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

FEB 17 2023

Marquardt Family Limited Partnership
c/o Ralph Marquardt
PO Box 1040
Yankton SD 57078

Dear Mr. Marquardt:

Enclosed are Water Permit and Water License No. 8648-3. The water license is the final document completing your process of obtaining a Water Right. Also, included is a map prepared by the staff engineer who conducted the investigation.

For your information SDCL 46-6-27 requires that if in the future the owner drills a replacement well and has no plan to use the old existing 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.

As long as you use the water beneficially, as stated in the Water License, the 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

- Regarding the equipment used to apply chemicals or fertilizer through your irrigation system, the staff engineer noted in his report, the absence of a discharge hose at least 20 feet from the source. A hose must be included with the low pressure drain to prevent contamination of the water source.

enclosures

email: Dave Husby



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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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.: 8648-3

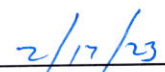
Name of Applicant: Marquardt Family Limited Partnership, c/o Dave Husby

Date of Posting: 10/25/2022

Date of Removal: 2/17/2023



Ron Duvall, Water Rights Permitting Administrator



Date

Subscribed and sworn to before me, a notary public, this 17th day of February, 2023.



Notary Public - South Dakota
My commission expires: 4/1/2025

