

WATER PERMIT NO. 8606-3

Name of Applicant: Mark Girard

Address: 46140 310th St, Vermillion SD 57069

Phone:

Amount of Water Claimed: 2.0 cfs

Total Acres: 160 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Clay

Type of Waste Disposal System:

Location: 10 miles northwest of Vermillion

PRIORITY

Date Received: 2-17-22

Application/License Fee: \$ 1050

Corrected Application Received: 3-4-22

Period of Annual Use: May 1 – Oct 31

Remarks:

Diversion Point: SW 1/4 Sec 26-T94N-R53W

Land to be Irrigated: SW 1/4 Sec 26-T94N-R53W

Depth of Well: 230 feet

Well Driller:

Remarks:

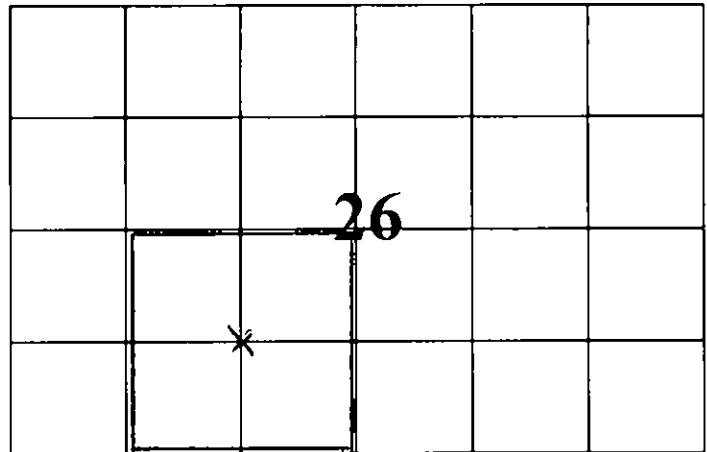
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 3-4-22

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



**SOUTH DAKOTA
WATER PERMIT NO. 8606-3**

Date of first receipt of application February 17, 2022.

Date of return to applicant for corrections, amendments or changes February 18, 2022.

Date of receipt of corrected application March 3, 2022.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8606-3 to Mark Girard, 46140 310th St, Vermillion SD 57069 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. 8606-3 appropriates 2.0 cubic feet of water per second from one well to be completed into the Lower James:Missouri Aquifer (approximately 230 feet deep) located in the approximate center of the SW 1/4 Section 26 for irrigation of 160 acres located in the SW 1/4 Section 26; all in T94N-R53W. This site is located approximately 11 miles northwest of Vermillion 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 – October 1.
3. The date from which applicant may claim right is February 17, 2022.
4. The date of approval of Permit No. 8606-3 is May 2, 2022.
5. One-fifth of the construction is to be completed on or before November 2, 2024.
6. All construction is to be completed on or before May 2, 2027.
7. Water is to be put to beneficial use on or before May 2, 2031.
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. 8606-3 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. 8606-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

JUN 01 2022
date



RECEIVED

FEB 17 2022

WATER RIGHTS
PROGRAM

PAID

FEB 17 2022

Ck# 1091

Rec't#

SD EForm - 0499LD V5

FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8606-3</u> (office use only) Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>
	Newspaper <u>Plain Talk</u>
	<u>Press & Dakotan</u>

Application For Permit To Appropriate Water For Irrigation

Type of Application:

☒ New☐ Vested Right☐ Amendment/Correction to Permit No. _____

(Use predates Mar 2, 1955)

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

1. Name to Appear on Irrigation Permit Mark Girard

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

Mailing Address 46140 310th St Vermillion SD 57069
(Address) (City) (State) (Zip Code)

Phone _____ Mobile _____ Email _____

2. Amount of water claimed 200 *CFS or 900 **GPM ***AF Total Acreage 135160
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable3. Source of water supply (approximate center)4. Location of point of diversion 1 well in SW quarter T94N R53W Sec 26
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)County Clay5. County or counties where water will be used Clay6. Annual period during which water is to be used May 1 - Oct 1

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 SW 1/4 of 26-94N-53W	33.40		
SE 1/4 of SW 1/4 of 26-94N-53W	33.40		
SW 1/4 of SW 1/4 of 26-94N-53W	33.40		
NW 1/4 of SW 1/4 of 26-94N-53W	33.40		

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

Drill irrigation well in ~~center~~ center of SW 1/4 of Section 26-94N-53WI, Mark Girard, Farmer/Owner, the applicant, certify under
Name of Person Title (if applicable)

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

Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☒ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(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) 230' Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____

d) Distance to nearest domestic well on applicant's property _____ Property owned by others _____

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

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

4. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

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

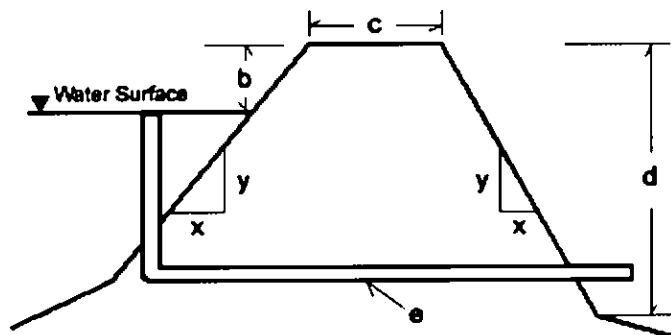
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



94N 53W
Section: 22

94N 53W
Section: 23

94N 53W
Section: 24

94N 53W
Section: 27

94N 53W
Section: 26

94N 53W
Section: 25

94N 53W
Section: 34

94N 53W
Section: 35

94N 53W
Section: 36





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

February 18, 2022

Mark Girard
46140 310th St
Vermillion SD 57069

Dear Mr. Girard:

Thank you for submitting the *Application for a Permit to Appropriate Water* for irrigation in Clay County. In order to complete the application, the following is required.

- A map needs to be submitted that references a government section corner or quarter corner including section, township and range. For your use, I have enclosed a map with those designations. Please outline the acres to be irrigated and mark the proposed well location with an "X".
- On the application you have requested a pump rate greater than the statutory limit of 1 cubic feet per second (cfs) per 70 acres. The application requests $132 \text{ acres} / 70 = 1.88 \text{ cfs}$ which equates to 846 gallons per minute (gpm). You applied for 900 gpm, so just over the limit. It is possible to apply for a greater rate than 1 cfs per 70 acres. Usually, a typical low-pressure pivot can operate in the 700 to 800 gpm range so there is no need to justify a greater amount if it is not needed. If the system you intend to install requires 900 gpm, please indicate so, then we have a basis for proceeding with the higher amount.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date February 17, 2022

RECEIVED OF Mark L Girard 46140 310th St., Vermillion SD 57069

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

Fee for Application for Permit No. <u>8606-3</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>8606-3</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
Em



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8606-3, Mark Girard**

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. 8606-3, Mark Girard, 46140 310th Street, Vermillion SD 57069.

The Chief Engineer is recommending APPROVAL of Application No. 8606-3 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. 8606-3 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. 8606-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund, Chief Engineer
April 6, 2022

Report to the Chief Engineer
On Water Permit Application No. 8606-3

Mark Girard

April 11, 2022

Water Permit Application No. 8606-3 proposes to appropriate water at a maximum instantaneous diversion rate of 2.0 cubic feet per second (cfs) from one well to be completed into the Lower James-Missouri aquifer (approximately 230 feet deep) located in the approximate center of the SW ¼ of Section 26 for the irrigation of 160 acres located in the SW ¼ of Section 26; all in T94N-R53W. The site of interest is located in Clay County approximately eleven miles northwest of Vermillion, SD.

AQUIFER: Lower James-Missouri (LJM)

HYDROGEOLOGY:

The Lower James-Missouri aquifer is a glacial outwash that consists of fine sand to cobble gravel that is intermixed in some expanses with discontinuous layers of till up to 25 feet thick (Lindgren and Hansen, 1990 and 1993). A portion of the Lower James-Missouri aquifer is designated as the Scotland management unit, but it is not included in the area of interest for Water Permit Application No. 8606-3 and will be excluded from this report. Hedges and others (1982) estimated the areal extent and amount of recoverable water stored in the Lower James-Missouri aquifer (Table 1). The Lower James-Missouri aquifer is hydrologically connected to the Lower Vermillion-Missouri aquifer, the Choteau East aquifer, the Niobrara aquifer, the Missouri Elk Point aquifer, Lower James-Missouri Scotland aquifer, adjacent bedrock aquifers, and surface water features (Hedges et al., 1982; Bugliosi, 1986; Lindgren and Hansen, 1993, Water Rights, 2022b). Depth to the top of the aquifer ranges from land surface in the James River flood plain to 245 feet below land surface (Lindgren and Hansen, 1993). Figure 1 displays the approximate delineation of the Lower James-Missouri aquifer based on the study completed by Hedges and others (1982).

Table 1. Estimated areal extent and amount of recoverable water stored in the Lower James-Missouri aquifer (Hedges et al., 1982)

	Clay	Hutchinson	Yankton	Total:
Areal Extent (acres)	5,400	93,800	92,500	191,700
Recoverable Water in Storage (acre-feet)	81,000	633,150	2,081,250	2,795,400

In Yankton County, the Lower James-Missouri aquifer trends across the county from the northwest to southeast and has a saturated aquifer thickness that ranges between 50 to 150 feet (Bugliosi, 1983 and 1986). In Hutchinson County, a maximum documented thickness of 201 feet was measured for the Lower James-Missouri aquifer (Lindgren and Hansen, 1993). The Lower James-Missouri aquifer varies between confined and unconfined aquifer conditions (Bugliosi, 1986; Lindgren and Hansen, 1990).

No water well or test hole completion report was submitted with Water Permit Application No. 8606-3. Within approximately two miles of the proposed diversion point, water well completion reports and lithologic logs on file for wells completed into the Lower James-Missouri aquifer have saturated aquifer thicknesses ranging from approximately 30 to 75 feet, with the depth to the top of aquifer materials ranging from approximately 120 to 150 feet below the ground surface, and static water levels varying between 90 to 130 feet below the ground surface at the time of well completion (SDGS, 2022; Water Rights, 2022b and 2022d). Based on the water well completion reports, and lithologic logs on file for observation wells, near the proposed diversion point, the Lower James-Missouri aquifer is expected to be confined near the proposed diversion point (SDGS, 2022; Water Rights, 2022b and 2022d).

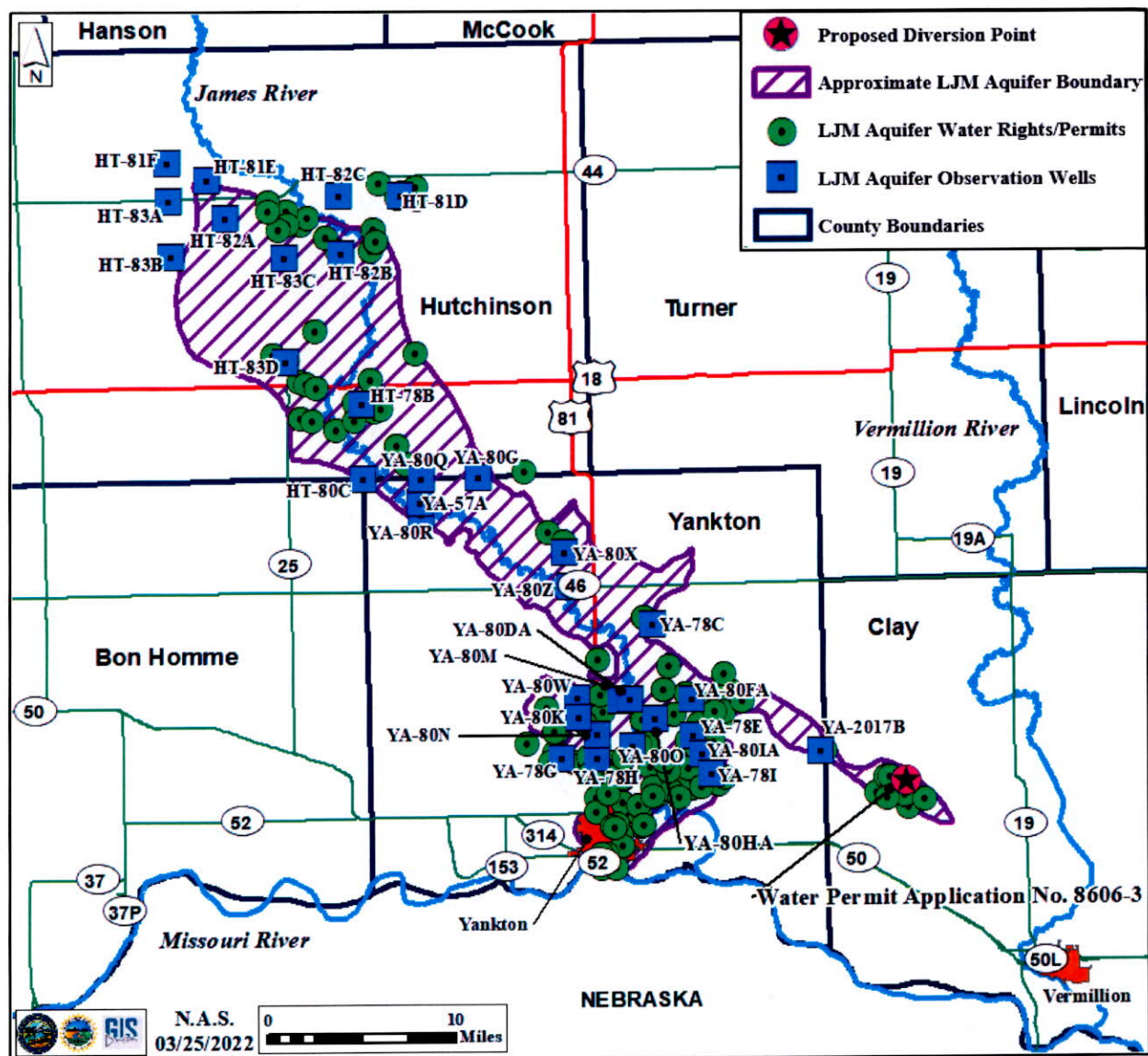


Figure 1. Map of the approximate Lower James-Missouri aquifer boundary (modified from Hedges et al., 1982), the Lower James-Missouri aquifer water rights/permits and observation wells (Water Rights, 2022b and 2022c), and the location of the proposed diversion point for Water Permit Application No. 8606-3

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

Pursuant to SDCL 46-2A-9, "A permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant's proposed use, that the diversion point can be developed without unlawful impairment of existing 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 as defined by SDCL 46-2-9 and 46-2-11." This report will address the availability of unappropriated water and the potential for unlawful impairment of existing domestic water uses and water rights within the Lower James-Missouri aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8606-3 proposes to appropriate water from the Lower James-Missouri aquifer. The probability of unappropriated water being available from the aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems." The Lower James-Missouri aquifer is not older than or stratigraphically lower than the Greenhorn Formation (Fahrenbach et al., 2010), and the applicant's proposed use is not for use in a water distribution system as defined by SDCL 46-1-6(17). Therefore, the average annual recharge and average annual withdrawal rates to and from the Lower James-Missouri aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the Lower James-Missouri aquifer in South Dakota occurs through seepage from adjacent surface water features, inflow from adjacent glacial aquifers when the hydraulic head of those aquifers is higher than the hydraulic head of the Lower James-Missouri aquifer, and infiltration of precipitation where the aquifer is at or near land surface (Bugliosi, 1986). Most recharge to glacial aquifers occurs during the spring and early summer months so when precipitation and long-term climatic conditions fluctuate, the amount of water received by the aquifer also varies (Bugliosi, 1986).

Using regional flow-net analysis, Hedges and others (1985) estimated a recharge rate of 1.5 inches per year to the Lower James-Missouri aquifer. The Lower James-Missouri aquifer has an estimated areal extent of approximately 191,700 acres (Hedges et al., 1982); therefore, the average annual recharge rate (based on Hedges et al., 1982 and 1985) is approximately 23,963 acre-feet per year.

Using observation well analysis, Hedges and others (1985) estimated a recharge rate of 3.9 inches per year to the unconfined portions of the Lower James-Missouri aquifer. Stonesifer (2014) estimated the areal extent of the unconfined portions of the Lower James-Missouri aquifer to be approximately 82,200 acres. However, this larger areal extent included portions of what Hedges et al. (1982) identified as the Plum Creek and Choteau: East aquifers for both the entire areal extent and the unconfined portions of the Lower James-Missouri aquifer. The average annual recharge rate to the unconfined portions of the Lower James-Missouri aquifer based on Stonesifer's (2014) unconfined areal extent and Hedges et al., (1985) estimated recharge rate to the unconfined portions of the aquifer is approximately 26,715 acre-feet/year, which should be considered a likely maximum recharge rate for the Lower James-Missouri aquifer. Overall, the average annual recharge rate to the Lower James-Missouri aquifer ranges between approximately 23,963 to 26,715 acre-feet/year (Hedges et al., 1982 and 1985; Stonesifer, 2014).

Discharge

Discharge from the Lower James-Missouri aquifer in South Dakota occurs through well withdrawals, leakage to the James River, and evapotranspiration in areas where the aquifer is at or near land surface (Bugliosi, 1986; Lindgren and Hansen, 1990).

Currently, there are 131 water rights/permits authorized to appropriate water from the Lower James-Missouri aquifer (Water Rights, 2022c). There are no future use permits reserving water from the Lower James-Missouri aquifer (Water Rights, 2022c).

Table 1 summarizes the eight non-irrigation water rights/permits authorized to appropriate water from the Lower James-Missouri aquifer with the estimated annual use for each water right/permit as determined by their limiting diversion rate or annual volume. Historically, average water use by non-irrigation appropriations limited by an instantaneous diversion rate have been assumed to be pumping 60% of full time at the respective permitted diversion rate. Water rights/permits limited by an annual volume are assumed to withdraw their entire respective annual volume limitation. This is a standard method used by the DNR-Water Rights Program for estimating annual withdrawals by non-irrigation appropriations from an aquifer (Water Rights, 2022c). Overall, the average annual withdrawal rate for the Lower James-Missouri aquifer non-irrigation water rights/permits is approximately 1,595 acre-feet per year (Table 1) (Water Rights, 2022c).

Table 1. Estimated annual use for the non-irrigation water rights/permits authorized to divert water from the Lower James-Missouri aquifer (Water Rights, 2022c)

Permit No.	Name	Status	Use	Authorized Diversion Rate (cfs)	Authorized Annual Volume (acre-feet)	Estimated Use (acre-feet/year)
840-3	Richard Ricke Stuehnagels Inc	LC	COM	1.11	N/A	482.2
1288-3	National Food Stores Inc	LC	IND	0.16	N/A	69.5
4556-3	Concrete Materials	LC	COM	0.44	N/A	191.1
6264-3	Yankton Land & Cattle Co.	LC	COM	0.56	N/A	243.3
6320-3	Wolf Creek Htm. Brth.	LC	COM	0.08	N/A	34.8
6925-3	Tschetter Colony	LC	COM	0.07	N/A	30.4
7827-3	Maxwell Colony	PE	COM	0.33	N/A	143.4
8412-3	Concrete Materials Co.	LC	IND	7.8	400	400
COM: Commercial, IND: Industrial, LC: Licensed Water Right, PE: Water Permit					TOTAL:	1,594.6

Currently, there are 123 irrigation water rights/permits authorized to appropriate water from the Lower James-Missouri aquifer (Water Rights, 2022c). Irrigation water rights/permits have been typically required to report their annual usage on an irrigation questionnaire since 1979. The average annual withdrawal rate for the Lower James-Missouri aquifer irrigation water rights/permits that have reported over the period of record is approximately 2,826 acre-feet per year (Table 2) (Water Rights, 2022a). To reflect the current development of irrigation water rights/permits more accurately, the estimated average annual withdrawal rate for the irrigation appropriations from 2011 to 2020 is approximately 4,993 acre-feet per year (Table 2) (Water Rights, 2022a).

Table 2 lists 121 water rights/permits as reporting in 2020. The number of permits listed as reporting in 2020 includes Water Permit No. 7520-3 which was cancelled in August of 2021, and Water Permit Nos. 4091-3, 4867-3, 7014-3, 7459-3, and 7567-3 which were incorporated into another water right/permit in 2021 (Water Rights, 2022a and 2022c), resulting in only 115 of those water rights/permits being currently active.

Eight water permit applications were approved in 2020 or 2021 for irrigation use – Permit Nos. 8543-3, 8535-3, 8534-3, 8524-3, 8508-3, 8501-3, 8483-3, and 8434-3 that collectively authorize 721 acres to be irrigated (Water Rights, 2022c), and not included as listed as reporting on Table 2 (Water Rights, 2022a). The eight water rights/permits approved in 2020 or 2021 for irrigation use, account for the difference between the 115 water rights/permits currently active out of the 121 permits listed as reporting on Table 2, and the 123 irrigation water rights/permits that are currently authorized to appropriate water from the Lower James-Missouri aquifer (Water Rights, 2022a and 2022c). Generally, irrigators in eastern South Dakota apply less than one foot of water per acre per year. However, to account for the fluctuation in wet and dry cycles from year to year, the one foot of water per acre per year application rate will be used to somewhat overestimate the annual withdrawal rate for these irrigation water rights/permits. Therefore, the estimated average annual withdrawal rate for the irrigation water rights/permits approved in 2020 or 2021 (and not included as listed as reporting) is approximately 721 acre-feet per year (Water Rights, 2022c). The collective estimated average annual withdrawal rate for the irrigation appropriations from 2011 to 2020 (4,993 acre-feet/year), plus the estimated average annual

withdrawal rate for the irrigation water rights/permits approved in 2020 or 2021 (721 acre-feet/year), is approximately 5,704 acre-feet/year (Water Rights, 2022a and 2022c).

There are domestic wells completed into the Lower James-Missouri aquifer that do not require a water right/permit, so the withdrawal amount for domestic use is unknown (Water Rights, 2022d). Since the introduction of rural water systems, many domestic wells are likely no longer in use or are not being used as primary water sources. Due to their relatively low diversion rates and the availability of rural water, withdrawals from domestic wells are not considered to be a significant portion of the hydrologic budget for the Lower James-Missouri aquifer.

Hydrologic Budget Summary

The average annual recharge rate to the Lower James-Missouri aquifer ranges between approximately 23,963 to 26,715 acre-feet per year (Hedges et al., 1982 and 1985; Stonesifer, 2014). The average annual withdrawal rate from the Lower James-Missouri aquifer totals approximately 7,459 acre-feet per year: (non-irrigation: 1,594.6 acre-feet/year; irrigation (2011 to 2020 plus the water rights/permits approved in 2020 or 2021): 5,704 acre-feet/year; Water Permit Application No. 8606-3 (if approved, assuming one foot application rate per authorized acre): 160 acre-feet/year). Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the Lower James-Missouri aquifer for the proposed appropriation.

Report on Water Permit Application No. 8606-3

Table 2. Reported historic irrigation use from the Lower James-Missouri aquifer (Water Rights, 2022a)

Year	No. of Permits Reporting	Reported Pumpage (acre-feet)
1979	22	588
1980	23	1,299.13
1981	33	1,834.06
1982	23	1,301.25
1983	27	1,306.54
1984	28	1,360
1985	27	1,483
1986	30	989.6
1987	30	1,041.60
1988	31	2,744.90
1989	31	2,144.80
1990	35	2,928.10
1991	42	2,599
1992	45	1,159
1993	45	230.44
1994	45	1,918.17
1995	41	1,483.32
1996	49	2,102.99
1997	50	2320
1998	53	2,787.03
1999	50	2,102.15
2000	51	3,751.08
2001	53	2,940.09
2002	53	4,061.52
2003	53	2,843.15
2004	47	2,886.65
2005	48	2,866.63
2006	50	3,630.92
2007	56	3,425.91
2008	79	4,494.03
2009	84	1,463.27
2010	85	665.37
2011	89	4,147.47
2012	93	13,058.45
2013	118	7,855.75
2014	125	3,347.24
2015	127	4,822.86
2016	126	5,747.01
2017	126	5,727.12
2018	126	1,035.87
2019	127	328.01
2020	121	3,864.53
Max	127	13,058.45
Min	22	230.44
Avg (1979-2020)	61.83	2,826
Avg (2011-2020)	117.8	4,993

OBSERVATION WELL DATA:

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires that the Water Management Board shall rely upon the record of observation well measurements in addition to other data to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.

Observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The DNR-Water Rights Program monitors 33 observation wells completed into the Lower James-Missouri aquifer (Water Rights, 2022b). The four closest observation wells to the proposed diversion point are YA-2017B (approximately five miles northwest), YA-78I (approximately 10.3 miles west), YA-80IA (approximately 10.9 miles northwest), and YA-78E (approximately 11.5 miles northwest) (as shown in Figure 1). The hydrographs for these observation wells are displayed in Figures 2 to 5 (Water Rights, 2022b). The data points utilized to construct the hydrographs are measurements of the static water level in the observation wells from the top of the well casing. It is worth noting the hydrograph titles display DENR Water Rights Observation Well on the hydrographs when the titles should display DNR Water Rights Observation Well on the hydrographs.

The hydrographs for the observation wells display stable water levels over their respective periods of record. The hydrographs for these four observation wells were compared to the hydrographs for the other observations wells completed into the Lower James-Missouri aquifer and each displayed a generally similar trend as shown on the hydrographs displayed in Figures 2 to 5, apart from observation well YA-2017B as the well was completed into the Lower James-Missouri aquifer in 2017 (Water Rights, 2022b). The hydrographs for the Lower James-Missouri aquifer indicate that the aquifer responds well to climatic conditions because water levels are rising during wetter periods and declining to a stable water level during drier periods. Additionally, the water levels in the observation wells display that the amount of recharge to and natural discharge from the aquifer greatly exceeds pumping with the aquifer returning to pre-pumping conditions between irrigation seasons. Aquifer recovery indicates that climatic conditions and therefore, the effects of recharge to and natural discharges from the aquifer govern the long-term fluctuations of waters levels in the aquifer rather than the impacts of pumping from the Lower James-Missouri aquifer. By recognizing that both recharge to and natural discharge from an aquifer can be captured for pumping, the observation well hydrographs demonstrate unappropriated water is available for the proposed appropriation. It is worth noting the most recent water level readings for the Lower James-Missouri aquifer observation wells are approximately the lowest readings on the hydrographs displayed in Figures 2 to 5. These water level readings are not of concern at this time as they were measured during the middle of the irrigation season in 2021 (Water Rights, 2022b).

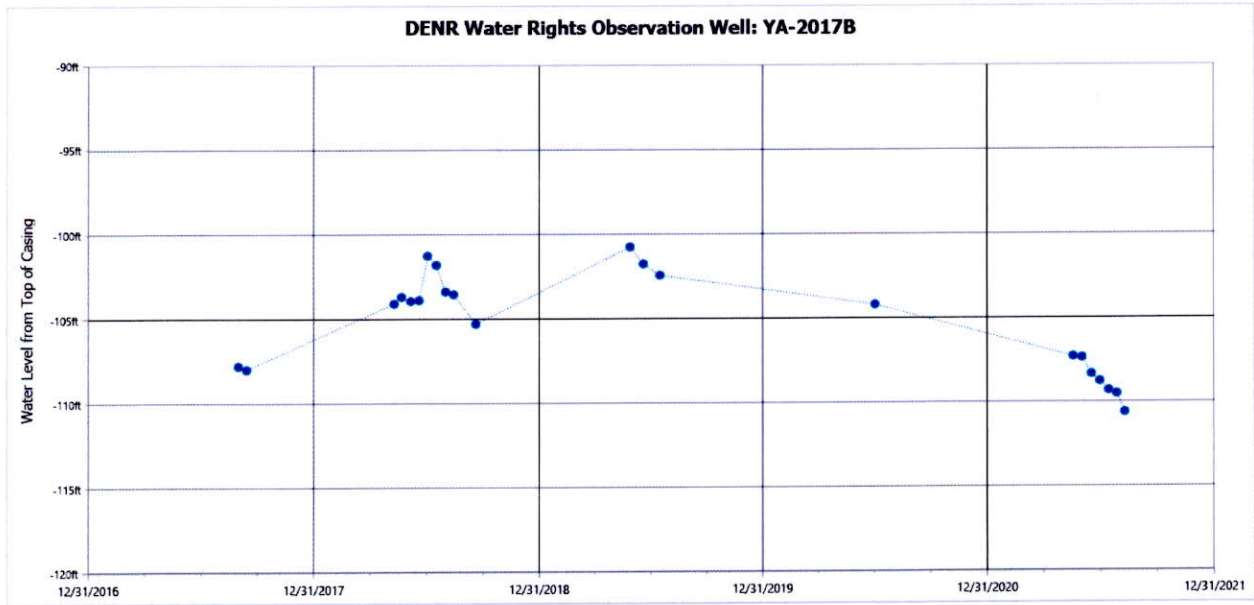


Figure 2. Hydrograph for observation well YA-2017B (Water Rights, 2022b)

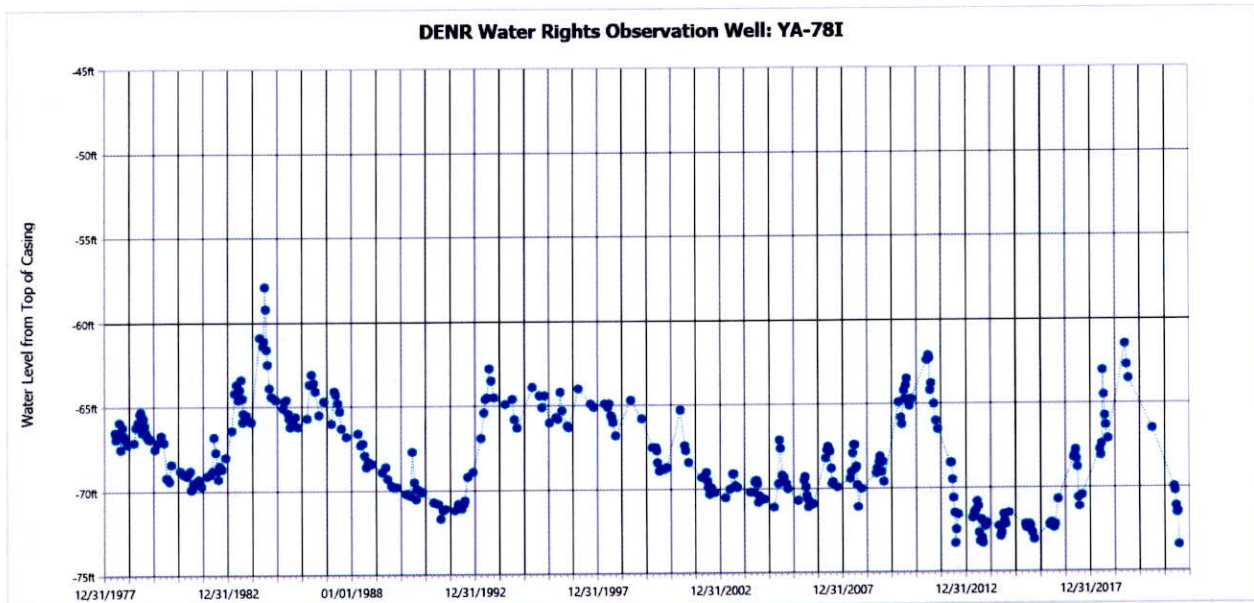


Figure 3. Hydrograph for observation well YA-78I (Water Rights, 2022b)

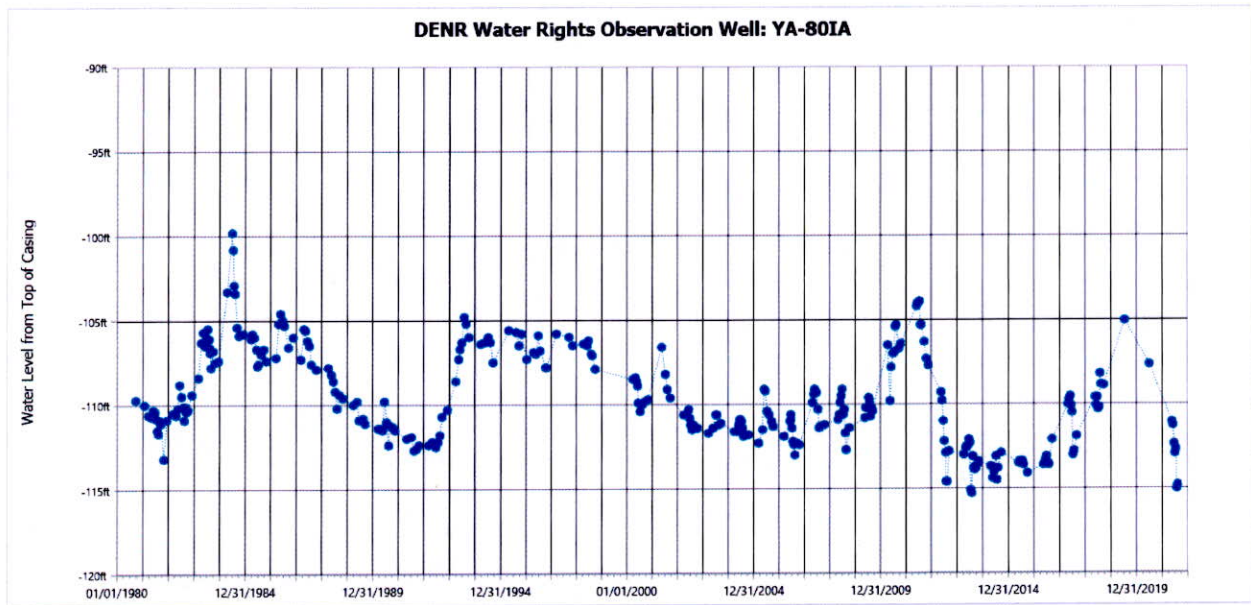


Figure 4. Hydrograph for observation well YA-80IA (Water Rights, 2022b)

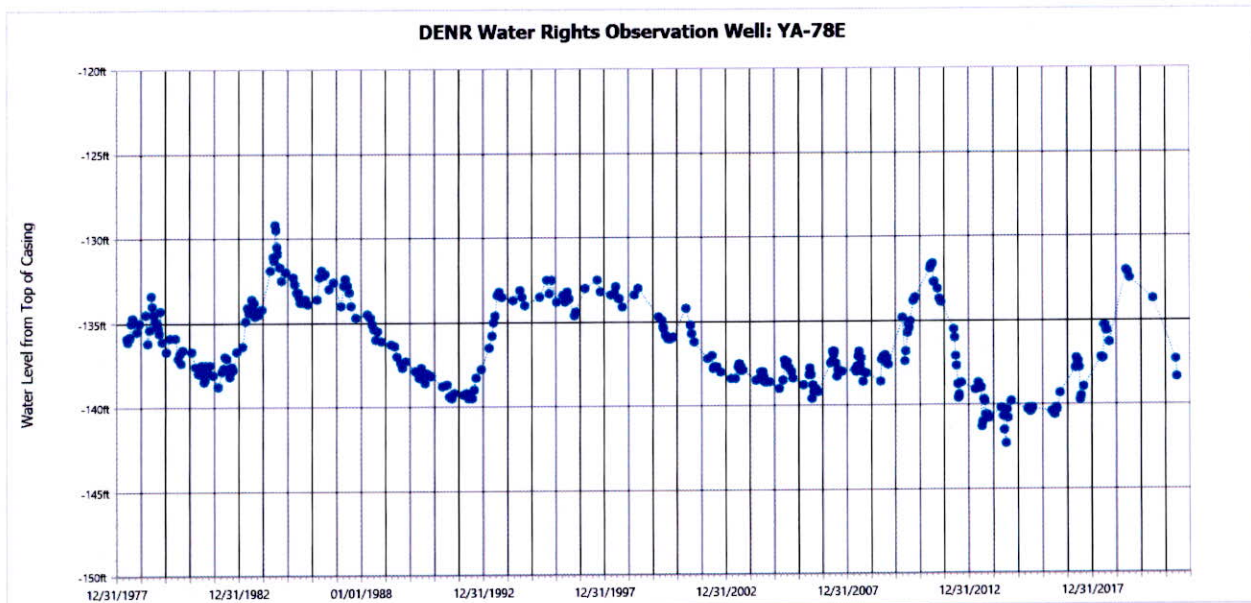


Figure 5. Hydrograph for observation well YA-78E (Water Rights, 2022b)

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are 123 water rights/permits authorized to appropriate water from the Lower James-Missouri aquifer (Water Rights, 2022c). The diversion points for Water Rights Nos. 6948-3, 7089-3, and 7510-3 are located within one mile of the proposed diversion point (as shown on Figure 6) (Table 3) (Water Rights, 2022c).

There are domestic wells on file with the DANR-Water Rights Program that are completed into the Lower James-Missouri aquifer, with the closest domestic well on file (not held by the applicant) approximately 1.3 miles west of the proposed diversion point (Water Rights, 2022d). There could potentially be other domestic wells completed into the Lower James-Missouri aquifer near the proposed diversion point that are not on file with the DANR-Water Rights Program.

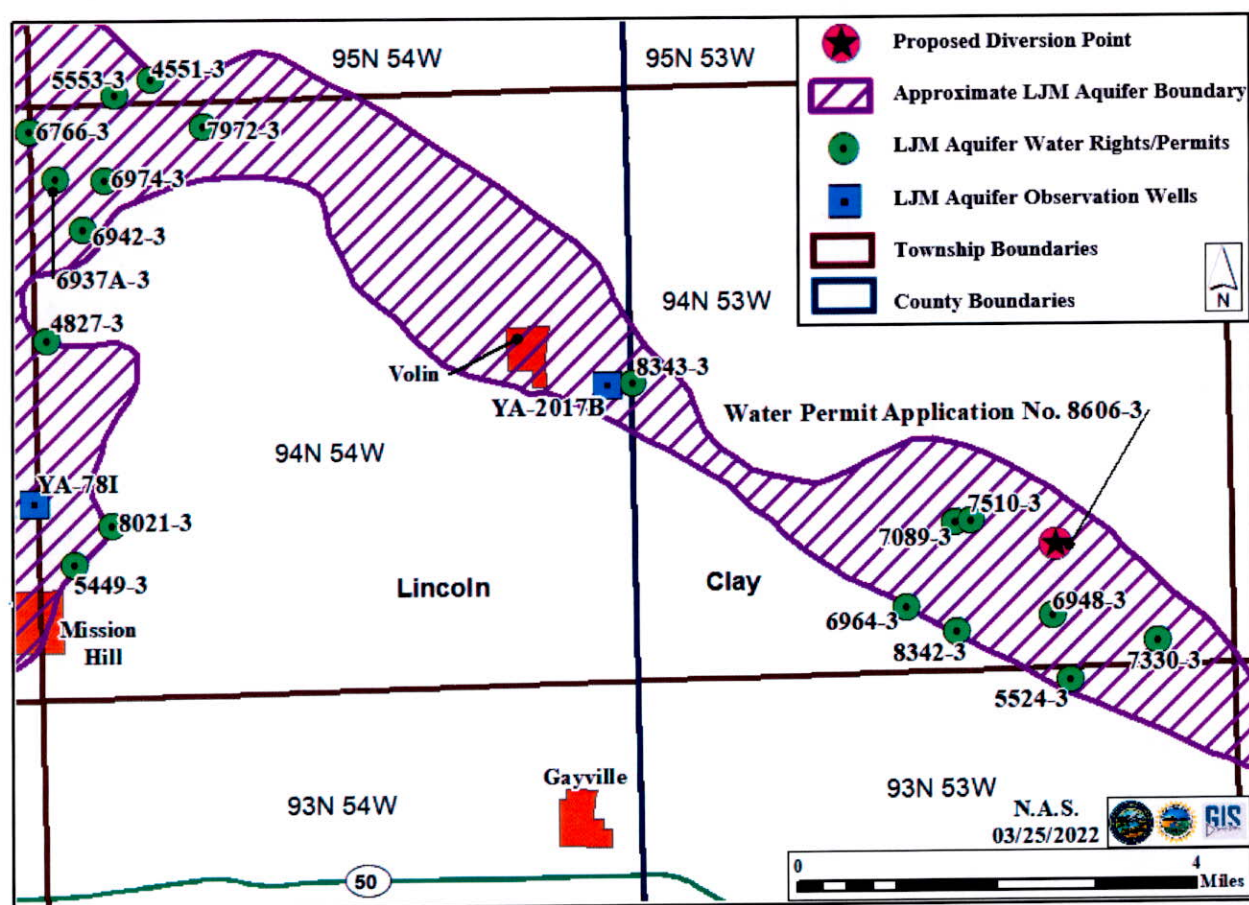


Figure 6. Location of the proposed diversion point for Water Permit Application No. 8606-3, with the Lower James-Missouri aquifer water rights/permits and observation well within approximately ten miles (Water Rights, 2022b and 2022c)

Table 3. Lower James-Missouri aquifer water rights/permits within approximately ten miles of the proposed diversion point for Water Permit Application No. 8606-3, as shown in Figure 6 (Water Rights, 2022c)

Permit No.	Name	Status	Use	Authorized Diversion Rate (cfs)	Acres if IRR
4551-3	Dennis/Darrell Nelson	LC	IRR	1.78	140
4827-3	Gary Smith	LC	IRR	1.83	128
5449-3	Heine Farm	LC	IRR	1.3	91
5524-3	Wade & Todd Druin	LC	IRR	2.12	254
5553-3	Lyle Stratman	LC	IRR	2	211
6766-3	Randy & Valerie Svendsen & Sons	LC	IRR	1.94	136
6937A-3	Dean R Morman	PE	IRR	1.78	135
6942-3	Craig I. Johnson	LC	IRR	2.11	292
6948-3	Brian Mount	LC	IRR	1.45	85
6964-3	Justin F Orr	LC	IRR, DOM	1.78	137
6974-3	Paul Gustad	LC	IRR	1.56	127
7089-3	Franklin & Gwen Orr	LC	IRR, DOM	1.06	71
7330-3	Jory or Elizabeth Freeburg	LC	IRR	1.56	122
7510-3	Howard A Kathol	LC	IRR	1.34	198
7972-3	Nelson Ag Holdings LLC	LC	IRR	1.67	116
8021-3	Jay Cutts	PE	IRR	1.78	96
8342-3	Weeg Family Farms L.L.P.	LC	IRR	1.78	139
8343-3	Logue Partnership	LC	IRR	1.61	156
LC: Licensed Water Right; PE: Water Permit; DOM: Domestic; IRR: Irrigation					

The Lower James-Missouri aquifer varies between confined and unconfined aquifer conditions (Bugliosi, 1986; Lindgren and Hansen, 1990). Based on the water well completion reports, and lithologic logs on file for observation wells, near the proposed diversion point, the Lower James-Missouri aquifer is expected to be confined near the proposed diversion point (SDGS, 2022; Water Rights, 2022b and 2022d). Drawdown created by pumping a well generally does not extend far from the pumped well in an unconfined aquifer; however, in a confined aquifer, drawdown from pumping could extend a distance from the diversion point. The exact drawdown behavior of a well cannot be known without an aquifer performance test. However, observation wells completed into the Lower James-Missouri aquifer near permitted/licensed diversion points can provide some insight on how the aquifer responds to pumping.

Observation well YA-801A (approximately 10.9 miles northwest of the proposed diversion point) has seven high-yield (assumed to be a well with an authorized diversion rate greater than 0.2 cfs) irrigation wells within approximately one mile of it (Water Rights, 2022b and 2022c). The lithologic log on file for YA-801A noted the well was drilled 230 feet below the ground surface, with a casing stick up height of 2.2 feet, and the top of aquifer approximately 137.2 feet below the top of the well casing (SDGS, 2022). The lowest recorded static water level on the

hydrograph (shown in Figure 4) is approximately 115 feet from the top of the well casing, which indicates there was still approximately 20 feet of artesian head pressure in YA-801A even during drier periods when high-yield irrigation wells are expected to be pumping more water (Water Rights, 2022b).

Within approximately two miles of the proposed diversion point, water well completion reports and lithologic logs on file for wells completed into the Lower James-Missouri aquifer have saturated aquifer thicknesses ranging from approximately 30 to 75 feet (SDGS, 2022; Water Rights, 2022b and 2022d). This would generally allow for enough thickness for a pump to be placed 20 feet below the top of the aquifer, which is required for the well to be considered adequate under ARSD 74:02:04:20(6). Any drawdown as a result of the proposed diversion is not expected to unlawfully impair nearby adequate wells. In Clay and Yankton Counties, there are no complaints on file with the DNR-Water Rights Program regarding well interference for adequate wells completed into the Lower James-Missouri aquifer (Water Rights, 2022e).

The Water Management Board recognizes that putting water to beneficial use requires a certain amount of drawdown to occur. The Board has developed rules to allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

“A well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner’s needs.”

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use during the issuance of Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Board adopted the Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, “general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable...” (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered as an unlawful impairment, it would also conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to install or lower pumps depending on the specific characteristics of the Lower James-Missouri aquifer at their location. However, when considering the statutes (SDCL 46-1-4 and 46-6-6.1), rules (ARSD 74:02:04:20(6) and (7)), the saturated aquifer thickness near the proposed diversion point, the artesian head pressure in observation wells completed into the aquifer near the proposed diversion point, and the lack of well interference complaints for adequate wells completed into the Lower James-Missouri aquifer in Clay and Yankton Counties, any drawdown created from the proposed diversion is not expected to cause an unlawful impairment on existing water right/permit holders or domestic users with adequate wells. Therefore, there is a reasonable probability that any interference from

the proposed appropriation will not impose unlawful impairments on existing users with adequate wells.

CONCLUSIONS:

1. Water Permit Application No. 8606-3 proposes to appropriate water at a maximum instantaneous diversion rate of 2.0 cfs from one well to be completed into the Lower James-Missouri aquifer (approximately 230 feet deep) for the irrigation of 160 acres. The site of interest is located in Clay County approximately eleven miles northwest of Vermillion, SD.
2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the Lower James-Missouri aquifer to supply the proposed appropriation.
3. There is a reasonable probability that the proposed diversion by Water Permit Application No. 8606-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic users.



Nakaila Steen

Natural Resources Engineer I

SD DANR - Water Rights Program

Reviewed by:



Adam Mathiowetz, PE

Natural Resources Engineer IV

SD DANR -Water Rights Program

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- Water Rights, 2022d. Well Completion Reports, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2022e. County Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

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APR 25 2022

WATER RIGHTS
PROGRAM

MARK GIRARD
46140 310TH ST
VERMILLION SD 57069

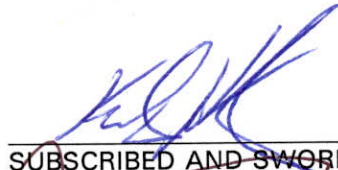
STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
4 + 22 NOTICE OF APPLICATIO

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 22nd DAY OF April, 2022
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$39.52 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 04/22/2022

FILED ON: 04/22/2022



SUBSCRIBED AND SWORN TO BEFORE ME THIS 22nd DAY OF April, 2022



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

NOTICE OF APPLICATION NO. 8606-3 to Appropriate Water

Notice is given that Mark Girard, 46140 310th St, Vermillion SD 57069 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second from one well to be completed into the Lower James:Missouri Aquifer (approximately 230 feet deep) located in the approximate center of the SW 1/4 Section 26 for irrigation of 160 acres located in the SW 1/4 Section 26; all in T94N-R53W. This site is located approximately 11 miles northwest of Vermillion SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8606-3 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 May 2, 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 May 2, 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 \$39.52 and can be viewed free of charge at www.sdpublicnotices.com

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APR 25 2022

WATER RIGHTS
PROGRAM

PLAIN TALK

MARK GIRARD
46140 310TH ST
VERMILLION SD 57069

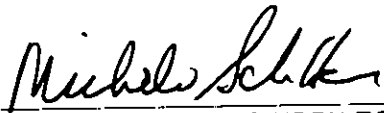
STATE OF SOUTH DAKOTA
COUNTY OF CLAY

MICHELE SCHIEVELBEIN, BEING FIRST DULY SWORN ON OATH DEPOSES AND SAYS THAT (S)HE IS THE ADVERTISING DIRECTOR OF YANKTON MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE PLAIN TALK, A LEGAL WEEKLY NEWSPAPER PUBLISHED AND CIRCULATED IN THE CITY OF VERMILLION, SAID COUNTY AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED NOTICE OF APPLICATION NO.

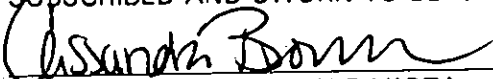
TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE NEWSPAPER ON THE 22nd DAY OF April, 2022
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PUBLISHED ON: 04/22/2022

FILED ON: 04/22/2022



SUBSCRIBED AND SWORN TO BEFORE ME THIS 22nd DAY OF April, 2022



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

Ad text : NOTICE OF APPLICATION NO. 8606-3 to Appropriate Water

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Published April 22, 2022.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, April 12, 2022 11:12 AM
To: Kelly Kronaizl
Subject: RE: [EXT] 8606-3, Mark Girard

Argh! That would be Mark Girard, 46140 310th St, Vermillion SD. He didn't list an email or phone number on his application. The information regarding the notice was mailed out to him yesterday. Sorry about that!
Karen

From: Kelly Kronaizl <kelly.kronaizl@plaintalk.net>
Sent: Tuesday, April 12, 2022 10:56 AM
To: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: RE: [EXT] 8606-3, Mark Girard

You didn't fill in the info for the person I need to schedule this with. Could I get their name, address and phone number please.

From: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Sent: Monday, April 11, 2022 1:21 PM
To: Kelly Kronaizl <kelly.kronaizl@plaintalk.net>
Subject: 8606-3, Mark Girard

Attached is a notice to be published on April 22, 2022 in both the Plain Talk and the Press & Dakotan.

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**

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PIERRE SD 57501-3182
danr.sd.gov

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

April 11, 2022

Mark Girard
46140 310th St
Vermillion SD 57069

Dear Mr. Girard:

Water Permit Application No. 8606-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Plain Talk printed at Vermillion (Ph # 605 624-2695) and the Press & Dakotan printed at Yankton (Ph # 605 665-7811). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspapers to authorize publication of your Notice and to arrange for payment. Early contact with the papers can eliminate delays. Upon receiving authorization from you, the publishers have been instructed to publish your notice. The newspapers have also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8606-3 to Appropriate Water

Notice is given that Mark Girard, 46140 310th St, Vermillion SD 57069 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second from one well to be completed into the Lower James:Missouri Aquifer (approximately 230 feet deep) located in the approximate center of the SW 1/4 Section 26 for irrigation of 160 acres located in the SW 1/4 Section 26; all in T94N-R53W. This site is located approximately 11 miles northwest of Vermillion SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8606-3 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 May 2, 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 May 2, 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



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 01 2022

Mark Girard
46140 310th St
Vermillion SD 57069

Dear Mr. Girard:

Enclosed is Water Permit No. 8606-3 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

Date:

Formation Log

Mark Girard 12" Irrigations Well SW Qtr of Sec 26 Volin SD

Formation	From	To
Top soil	0	2
Clay dark brown	2	5
Clay brown	5	31
Clay gray	31	45
Gravel	45	46
Clay blue sandy	46	81
Clay gravely w/ some chalk	81	91
Gravel w/ clay	91	97
Clay gray sandy	97	127
Sand	127	162
Gravel coarse	162	180
Gravel & sand	180	188
Shale	188	200

Mark Girard Section 26 Volin SD

Legend

TH # 1 200 feet
n 42 55.6810 w 97 4.6170

Mark Girard TH # 2 200 feet 189 ft 12" Well June 2022

308th St

456th Ave

457th Ave

456th



2000 ft