

WATER PERMIT NO. 8692-3

Name of Applicant: **Reid Bird**

Address: **3605 473rd Ave, Elk Point SD 57025** Phone: **712 251-6343**

Amount of Water Claimed: **1.78 cfs** Total Acres: **120**

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

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

Type of Waste Disposal System:

Location: **8 miles northwest of Elk Point**

PRIORITY Date Received: **12-27-22** Application/License Fee: **\$950**

Corrected Application Received: Period of Annual Use: **April 1 – September 30**

Remarks: **Requesting diversion rate greater than statutory limit.**

Diversion Point: **NW 1/4 SW 1/4 Sec 10-T92N-R50W**

Land to be Irrigated: **SW 1/4 Sec 10-T92N-R50W**

Depth of Well: **200 feet deep**

Well Driller:

Remarks:

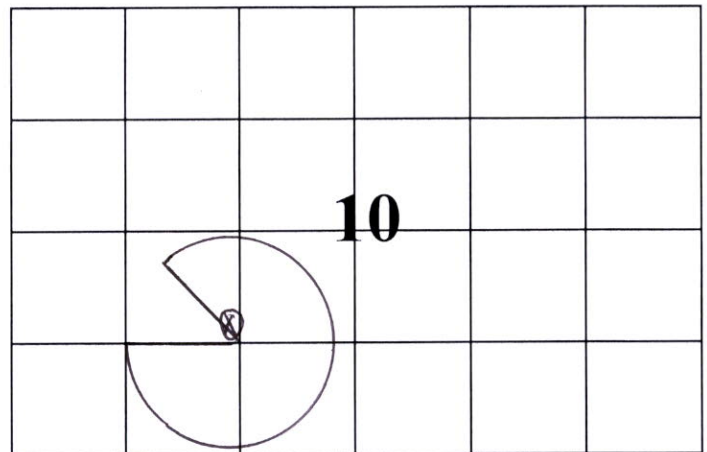
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **12-27-22**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



**SOUTH DAKOTA
WATER PERMIT NO. 8692-3**

Date of first receipt of application December 27, 2022.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8692-3 to Reid Bird, 31605 473rd Avenue, Elk Point SD 57025 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. 8692-3 authorizes 1.78 cubic feet of water per second (cfs) from one well to be completed into the Lower Vermillion Missouri Aquifer (approximately 200 feet deep) located in the NW 1/4 SW 1/4 Section 10 for irrigation of 120 acres located in the SW 1/4 Section 10; all in T92N-R50W. This site is located 8 miles northwest of Elk Point 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: April 1 – September 30.
3. The date from which applicant may claim right is December 27, 2022.
4. The date of approval of Permit No. 8692-3 is March 6, 2023.
5. One-fifth of the construction is to be completed on or before September 6, 2025.
6. All construction is to be completed on or before March 6, 2028.
7. Water is to be put to beneficial use on or before March 6, 2032.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8692-3 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. 8692-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8692-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 120 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

MAR 27 2023
date



DEC 27 2022

PAID

DEC 27 2022

Ck# 21582

Rec't#

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8692-3</u> (office use only) Hydrologic Unit <u>10170101</u>	OFFICE OF WATER
	Basin <u>Missouri River</u>	
	Newspaper <u>Leader-Courier - Elk Point 356-2632</u> (Thurs)	
	<u>Press & Dakotan 645-7811</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 REID BIRD

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

Mailing Address 31605 473RD AVE ELK POINT SD 57025
(Address) (City) (State) (Zip Code)

Phone _____ Mobile 7122516343 Email reidbird@empireag.net

2. Amount of water claimed 1.78 *CFS or 800 **GPM _____ ***AF Total Acreage 120
(*Cubic Feet per Second) (**Gallons per Minute) (***) Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply LOWER MISSOURI VERMILLION AQUIFER

4. Location of point of diversion 1 WELL NWSW T92N R50W S10
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County UNION

5. County or counties where water will be used UNION

6. Annual period during which water is to be used APRIL 1 - SEPTEMBER 30

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

Land Description	Acres	Land Description	Acres
NESW T92N R50W S10	35		
NWSW T92N R50W S10	15		
SESW T92N R50W S10	35		
SWSW T92N R50W S10	35		

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

1 well in the NWSW 1/4 T92N R50W S10 to supply water to a pivot. The pivot will irrigate 120 acres.

Requesting diversion rate greater than statutory limit

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

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

Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☒ Drilling new well(s) ☐ Using existing well(s)a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(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) 200 Depth to Top of Water Bearing Material ≈ 160 Depth to Water from Surface ≈ 130d) Distance to nearest domestic well on applicant's property ≈ 800' Property owned by others NO**2. Wastewater Disposal System Information**

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

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

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

4. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

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

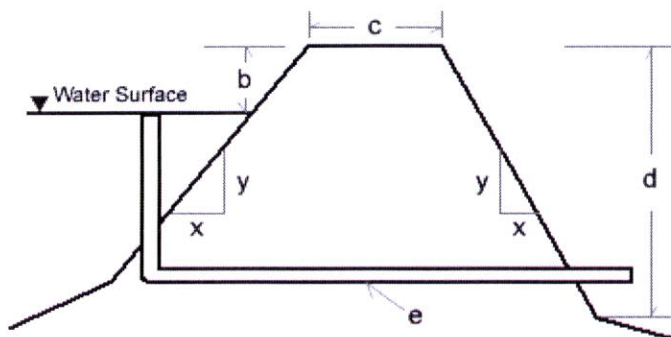
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





Water Well Completion Reports

SEARCH WELLS
Help Tools

DRILLERS

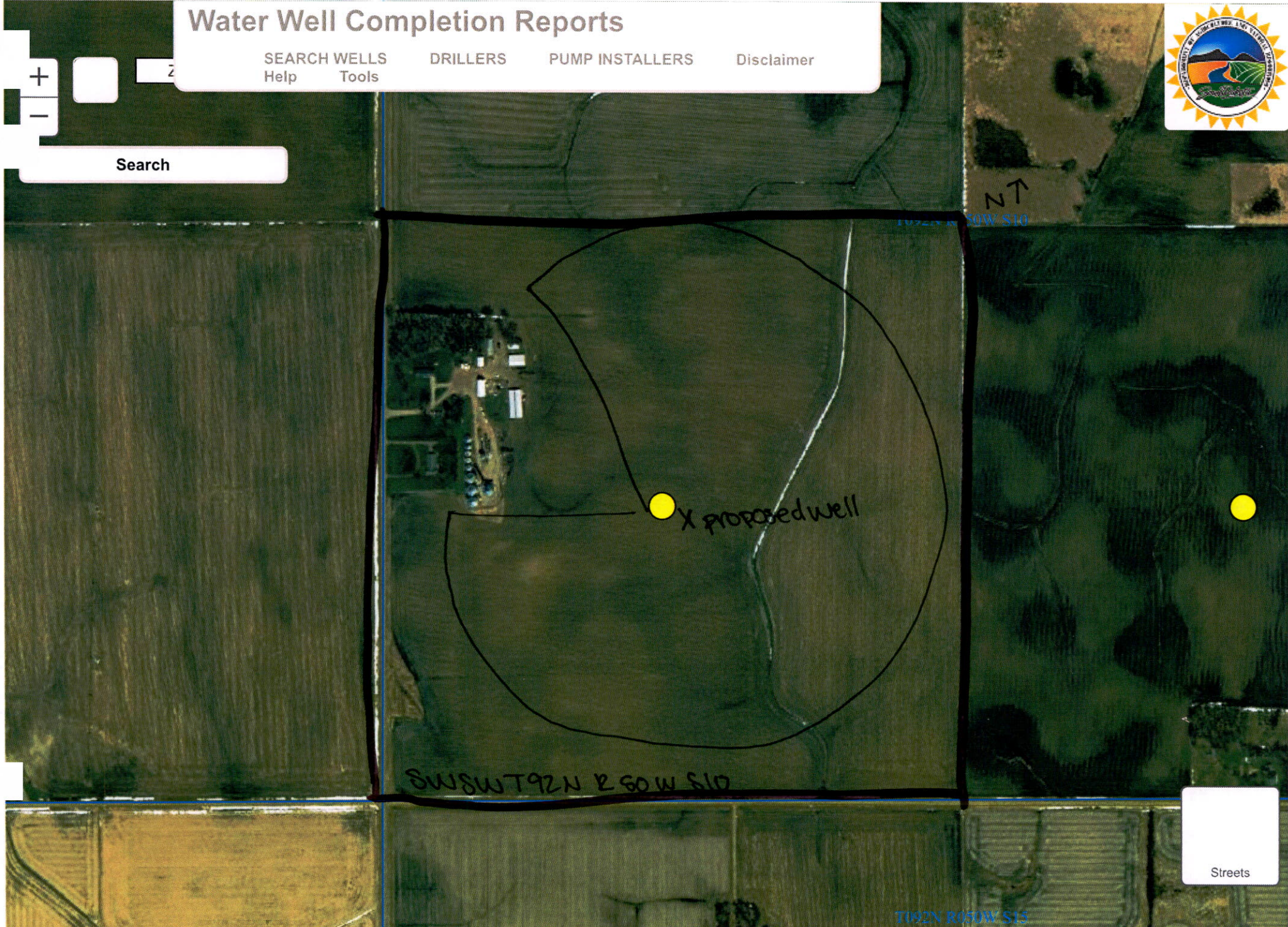
PUMP INSTALLERS

Disclaimer

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Search



Streets

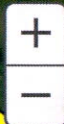
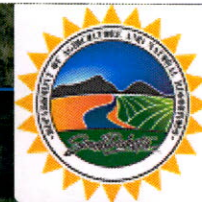
Water Well Completion Reports

SEARCH WELLS
Help Tools

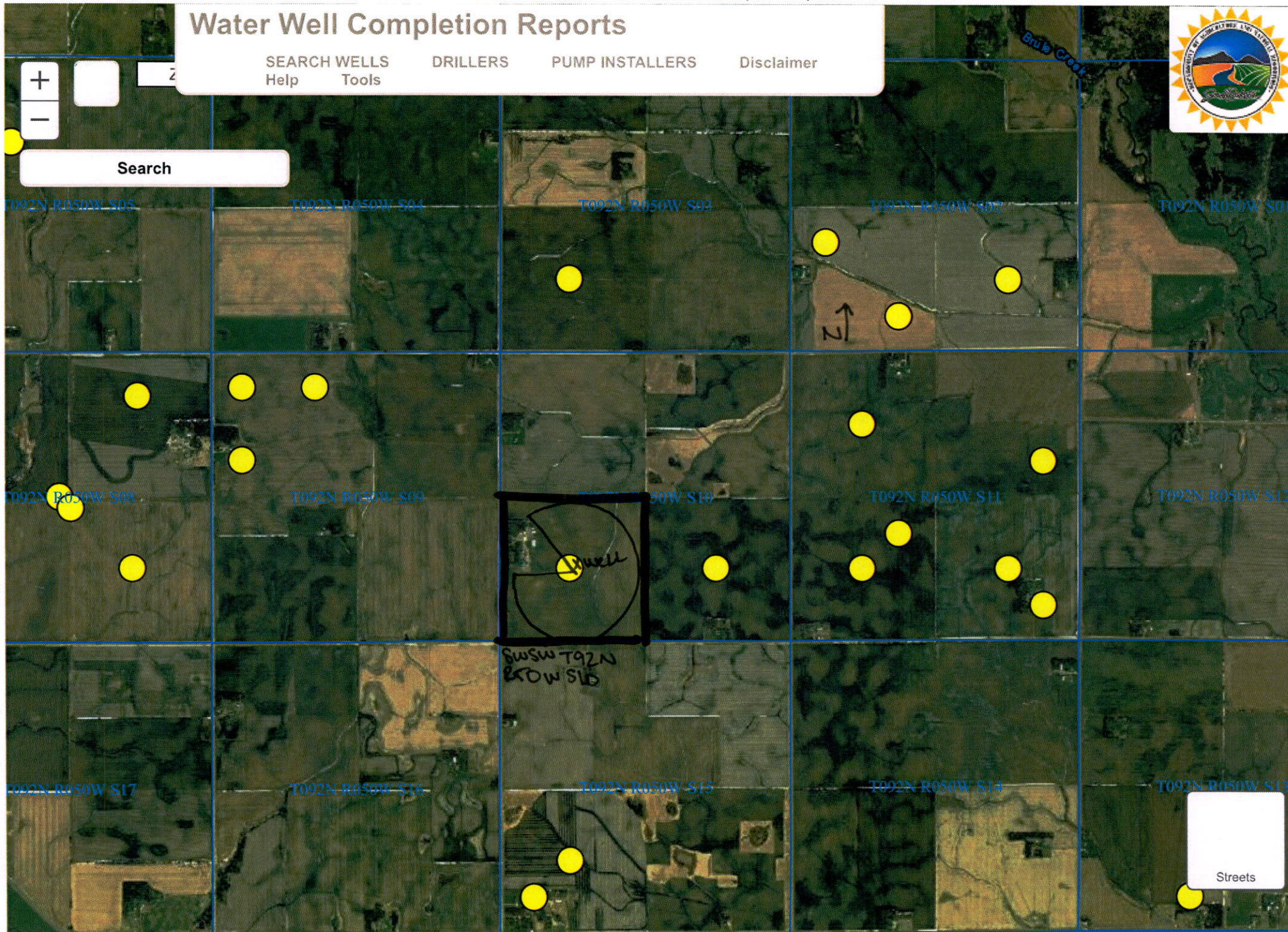
DRILLERS

PUMP INSTALLERS

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Search



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Water Well Completion Reports

SEARCH WELLS
Help Tools

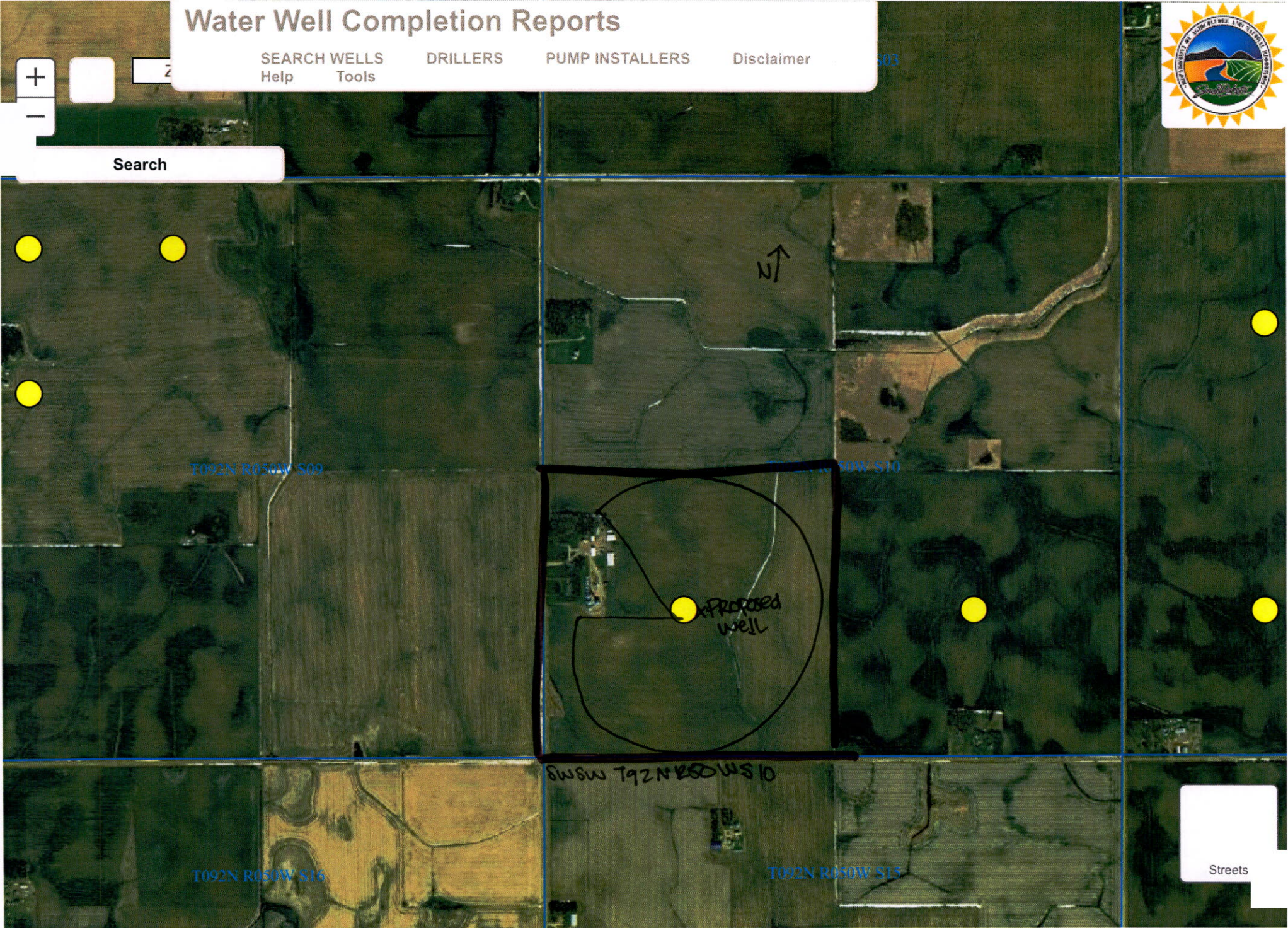
DRILLERS

PUMP INSTALLERS

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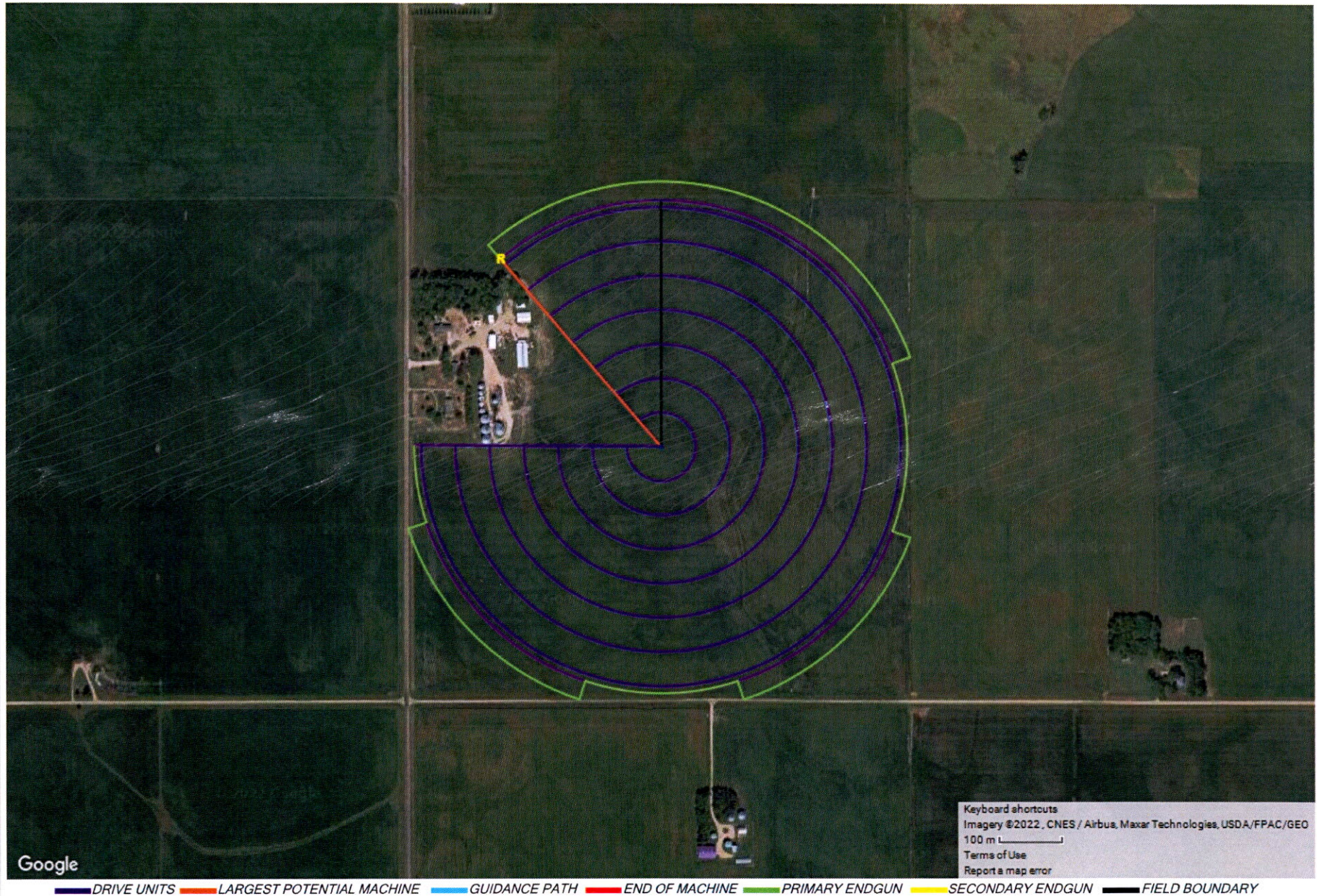




Project Name - Reid Bird - Farm Quarter

Version Name - Reid Bird - Farm Quarter_Version

Map Summary Report - Reid Bird - Farm Quarter



HEINE ELECTRIC & IRRIGATION - 307 S. Robinson Ave, Hartington, NE, 68739-5139, United States

SOUTH DAKOTA WATER WELL COMPLETION REPORT

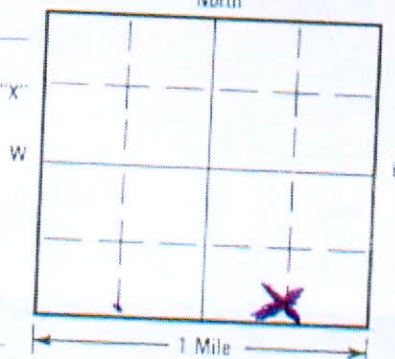
07-92

Location T-92-N 1/4 R-50-W 1/4 Sec 10 Twp 10N Rg 10E

County Union

North

Please mark well location with an "X"



Well Completion Date

9-23-97

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 150' ft. from Septic Tank (identify source)

PROPOSED USE:

Closed Loop-heat Pump

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

METHOD OF DRILLING:

Rotary Mud

CASING DATA:

☐ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA

Grout Type Bentonite No. of Sacks 42 Grout Weight 9.5 lb./gal 180 ft. 0 ft.

Describe grouting procedure Bottom to top with Trem Tube

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter IN Length FEET

Material

Slot Size Set From Feet to Feet

Other information

WAS A PACKER OR SEAL USED? ☐ YES ☐ NO

If so, what material?

Describe packer(s) and location?

DISINFECTION: Was well disinfected upon completion?

YES, How

NO, Why Not?

Laboratory sent to for water quality analysis

Well Owner: Edward J. Schueren

Business Name:

Address: Rt 2 Box 434

EIK Point SD 57035

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Black Dirt</u>	<u>0</u>	<u>2</u>
<u>Brown Drift</u>	<u>2</u>	<u>18</u>
<u>Blue drift</u>	<u>18</u>	<u>100</u>
<u>Sand</u>	<u>100</u>	<u>145</u>
<u>Blue Drift-Sand</u>	<u>145</u>	<u>180</u>

STATIC WATER LEVEL

If flowing: closed in pressure Feet

GPM flow PSI

Controlled by ☐ Valve ☒ Checkers ☐ Other

Reduced Flowrate 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

Closed loop heat Pump

This well was drilled under license # 595

And this report is true and accurate.

Drilling firm Geo-Loop Inc.

Signature of License Representative:

Jeff Bowen

Signature of Well Owner or Equitable Property Holder:

Edward Schueren

Date: 9/23/97

Union

c 38c

WELL LOG

Attach sheet if more space is needed

If a flowing well, flow of completed well _____ 6 P.M.

James W. Itmore
Name of Drilling Contractor

PUMP INSTALLATION

Company name and size of pump Goulds HP $\frac{3}{4}$

Type of pump Sub Capacity of installed pump 10 GPM G.P.M.

Depth of pump placement 166 ft., Date of pump installation 9-19-83

Show exact vertical length of water surface measuring tube, when installed _____ ft., tube diameter _____, tube material _____.



James Wetmore
Name of Pump Installation Contractor

6-7-84

4-78

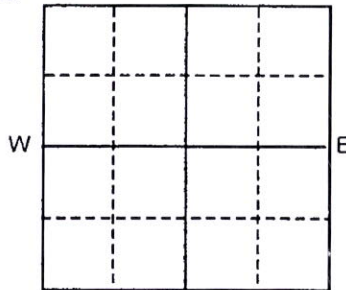
Signed By James Wilson Date 12-6-78

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 NW 1/4 Sec 9 Twp 92N Rg 50WCounty Union

North

Please mark well
location with an "X"

Well Completion Date

07/24/13

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other
 If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>12.00</u> IN	<u>0.0</u> FT	<u>172.0</u> FT	<u>18.00</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Bentonite</u>	<u>32 44</u>	Lb/gal	<u>0.0</u> Ft	<u>170.0</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

per KB/RT

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 12.00 Inches Length 20' / 20' Feet
 Material Stainless steel
 Slot Size .070/.050 Set From 172.0 Feet to 212.0 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? chlorinated☐ No, Why Not?Lab to which water
quality sample sent for analysisn/aWell Owner: Scott Wagner

Business Name: _____

Address: 31633 172nd AveCity, State, Zip: Elk Point SD 57025

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top soil	0	4
Brown clay	4	21
Blue clay	21	130
Coal & sand, fine to medium	130	215
Coal & coarse sand	210	219

STATIC WATER LEVEL 102.0 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: well was not test pumped, no pumping data available.
☐ Bailed
☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

GPS: N 42 48.209
W 096 45.816This well was drilled under license # 475 and this report is true and accurate.Drilling firm: Thein Well Co., Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

RECEIVED

NOV - 7 2013

WATER RIGHTS
PROGRAM

Date: _____

12-11-13

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date December 28, 2022

RECEIVED OF Reid/Collette Bird 31605 473rd Ave., Elk Point SD 57025

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

Fee for Application for Permit No. <u>8692-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$750.00
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8692-3</u>	\$200.00
Fee for Filing Transfer Form _____	\$ _____
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law)	TOTAL
	\$950.00

By Eric Gronlund
Chief Engineer
vm



**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. 8692-3, Reid Bird**

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. 8692-3, Reid Bird, 31605 473rd Avenue, Elk Point SD 57025.

The Chief Engineer is recommending APPROVAL of Application No. 8692-3 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. 8692-3 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. 8692-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8692-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 120 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund, Chief Engineer
February 13, 2023

Report to the Chief Engineer
On Water Permit Application No. 8692-3

Reid Bird

February 14th, 2023

Water Permit Application No. 8692-3 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Lower Vermillion Missouri aquifer (approximately 200 feet deep) located in the NW ¼ SW ¼ Section 10 for irrigation of 120 acres located in the SW ¼ Section 10; all in T92N-R50W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. The site of interest is located approximately 8 miles northwest of Elk Point, SD in Union County.

AQUIFER: Lower Vermillion Missouri (LVM)

HYDROGEOLOGY:

The Lower Vermillion Missouri aquifer, referred as the LVM aquifer for the remainder of this report, is a buried glacial outwash that was deposited by meltwater streams beyond the margin of active glacial ice (Stephens, 1967). The LVM aquifer materials range in size from a coarse sand to a coarse gravel (Niehus, 1994). The LVM aquifer is primarily confined but can be locally found under unconfined conditions in the flood plain of the Vermillion River (Niehus, 1994; Stephens, 1967). The LVM aquifer has an average thickness of about 99 feet in Union County, with a recorded maximum thickness of 144 feet (Niehus, 1994). Table 1 shows the information related to the areal extent of the LVM aquifer. The area utilized for this report is approximately 106,000 acres (Mathiowetz, 2018).

Table 1. Estimated areal extent for the historic LVM aquifer boundary (Hedges and others, 1982), the portion of the UVM:S aquifer that overlies the historic LVM aquifer boundary (Buhler, 2014). The current LVM aquifer boundary (Mathiowetz, 2018), and the unconfined portion of the LVM aquifer along the Vermillion River (modified from Jensen, 2000; modified from Stonesifer, 2013).

Delineation	Estimated Areal Extent (acres)
Historic Lower Vermillion Missouri Aquifer (modified from Hedges and others, 1982)	124,000
Upper Vermillion Missouri: South Aquifer (UVM:S) (modified from Buhler, 2014) - Portion that overlies LVM aquifer boundary estimated by Hedges and others, 1982.	18,000
Current Lower Vermillion Missouri Aquifer* (Mathiowetz, 2018)	106,000
Unconfined Portion of Lower Vermillion Missouri Aquifer - not enclosed in UVM:S (Buhler, 2014) (modified from Jensen, 2000; modified from Stonesifer, 2013)	12,000
*Estimated by subtracting UVM:S aquifer boundary (Buhler, 2014) from historic boundary (Hedges and others, 1982)	

The LVM aquifer is hydrologically connected to the Upper Vermillion Missouri: South aquifer to the north, the Missouri: Elk Point aquifer to the south, the underlying Dakota aquifer, and the Vermillion River (Buhler, 2014; Mathiowetz, 2018; Niehus, 1994; Stephens, 1967). Hedges and others (1982) delineated a boundary between the Upper Vermillion Missouri aquifer and LVM aquifer with portions of each boundary being modified by Buhler (2014) and Mathiowetz (2018) in response to additional study of the Upper Vermillion Missouri aquifer, as shown on Figure 1.

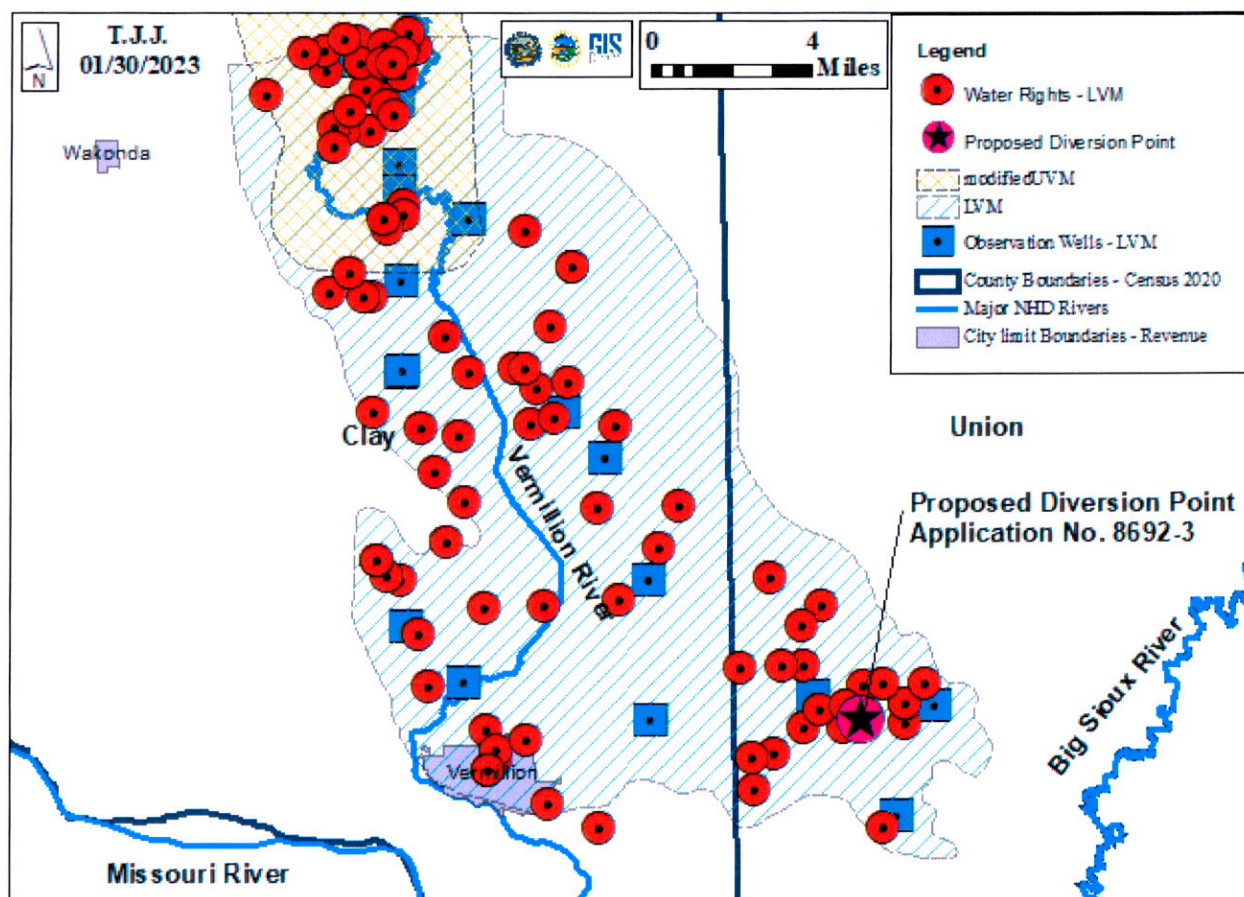


Figure 1. Map of the approximate LVM aquifer boundary delineated by Hedges and others (1982) with a portion of the UVM:S and LVM aquifer boundary estimated by Buhler (2014) and Mathiowetz (2018) respectively, and the location of proposed diversion point for Water Permit Application No. 8692-3, and LVM aquifer water rights/permits and observation wells (Water Rights, 2023b and 2023c). Note a number of water rights/permits considered to be appropriating water from the Upper Vermillion Missouri: South for the purposes of water management have not been formally reassigned so they still show up in Water Rights' databases (and therefore this map) as LVM permits.

A few different nearby water well completion reports were submitted with the application. After analyzing these completion reports, the completion report for Water Right No. 7909-3 will be used as a point of reference for this report. The well for Water Right No. 7909-3 was completed into the LVM Aquifer on July 24th, 2013 and is located one mile northwest of the diversion point for this application (Water Rights, 2023b). The completion report has a saturated aquifer

thickness of 89 feet. The depth to the top of aquifer material is 130 feet below the ground surface, and static water level at 102 feet below the ground surface at the day after well completion (SDGS, 2023; Water Rights, 2023b). Based on completion reports near the proposed diversion point, the LVM aquifer is expected to be confined at the diversion point (SDGS, 2023; Water Rights, 2023b and 2023d).

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 unappropriated water is available for the applicant’s proposed use, the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, the proposed use is a beneficial use, and the permit is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board as defined by §§ 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 uses and water rights within the LVM aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8692-3 proposes to appropriate water from the LVM 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 LVM aquifer is not older than or stratigraphically lower than the Greenhorn Formation, 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 LVM aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the LVM aquifer is received primarily through infiltration of precipitation where the aquifer is at or near land surface, groundwater inflow from the Upper Vermillion Missouri: South aquifer, seepage from Vermillion River, and leakage from the underlying Dakota aquifer (Niehus, 1994; Stephens, 1967). Using observation well analysis Hedges et al (1985) estimated a recharge rate of 3.8 inches per year for unconfined portion of the LVM aquifer. However, Stonesifer (2013) recalculated the recharge rate to be an estimated 4.58 inches per year by using the same method but with additional observation well data. The unconfined area for this primarily confined aquifer is approximately 12,000 acres (Table 1; modified from Jensen, 2000; modified from Stonesifer, 2013). Therefore, the estimated average annual recharge rate for the

unconfined portion of the LVM aquifer is approximately 4,580 acre-feet/year (based on Stonesifer, 2013 and modified from Jensen, 2000).

It is assumed that the confined portion of the LVM aquifer recharges at a similar rate and is hydrologically similar to the confined portion of the Upper Vermillion Missouri aquifer. Using regional flow-net analysis, Hedges and others (1985) estimated the recharge rate of the, primarily confined, Upper Vermillion Missouri aquifer to be approximately 0.25 inches per year. The confined portion of the LVM aquifer is approximately 94,000 acres, this was found by subtracting the unconfined area from the current total area on Table 1. Using the Hedges and others (1985) confined recharge rate multiplied by the confined portion areal extent, the average annual recharge rate for the confined portion of the LVM aquifer is approximately 1,960 acre-feet per year. Combining the average annual recharge rate for both the confined and unconfined portions of the LVM aquifer, the average annual recharge rate is approximately 6,540 acre-feet per year.

Discharge

Discharge from the LVM aquifer in South Dakota primarily occurs through well withdrawals, seepage to surface water features, and evapotranspiration in areas where the aquifer is at or near land surface. There are 91 water rights/permits authorized to appropriate water from the LVM aquifer within the historical aquifer boundary delineated by Hedges and others (1982) (Water Rights, 2023c). However, 61 water rights/permits are in both the LVM aquifer boundary delineated by Hedges and others (1982) and the Upper Vermillion Missouri: South aquifer boundary delineated by Buhler (2014). Of the 61 water rights/permits, 29 are currently withdrawing water from the Upper Vermillion Missouri: South aquifer and are still labeled as withdrawing water from the LVM aquifer. Therefore, by excluding the 29 water rights/permits that are withdrawing from the Upper Vermillion Missouri: South aquifer from the 91 water rights/permits, there are 62 water rights/permits authorized to appropriate water from the LVM aquifer within the current aquifer boundary delineated by Mathiowetz (2018). There are no future use permits reserving water from the LVM aquifer (Water Rights, 2023c).

Table 2 summarizes the 7 non-irrigation water rights/permits authorized to appropriate water from the LVM aquifer with the estimated annual use for each water right/permit as determined by their limiting diversion rate or annual volume. The data on Table 2 is broken up into two sets of water rights/permits 1) those that are located in the historic aquifer boundary by Hedges and others (1982) but not in the Upper Vermillion Missouri: South aquifer boundary delineated by Buhler (2014) and 2) water rights/permits that are located within both boundaries. The amount of water withdrawn was estimated by assuming the non-irrigation water rights/permits limited by an annual volume will withdraw their entire appropriated volume every year. It is estimated that the non-irrigation water rights/permits limited only by a diversion rate will pump at their maximum permitted diversion rate for 60 percent of the time. This is a standard method used by the DANR-Water Rights Program for estimating average annual withdrawals by non-irrigation appropriations limited solely by diversion rate. Overall, the estimated average annual withdrawal rate for the LVM aquifer non-irrigation water rights/permits within the historic aquifer boundary (Hedges and others, 1982) is approximately 1,224.4 acre-feet/year, and approximately 48.6 acre-

feet/year excluding water rights/permits that are in the Upper Vermillion Missouri: South delineation by Buhler (2014) (Table 2) (Water Rights, 2023c).

Table 2. Estimated average annual use for non-irrigation water rights/permits authorized to appropriate water from the LVM aquifer within the historic aquifer boundary by Hedges and others (1982) but not the UVM:S aquifer delineation by Buhler (2014), and non-irrigation water rights within aquifer boundary delineated by Hedges and others (1982) and Buhler's (2014) UVM:S boundary (Water Rights, 2023c).

Permit No.	Name	Uses	Status	Authorized Diversion Rate (cfs)	Authorized Annual Volume (acre-feet)	Estimated Use (acre-feet/year)
1870-3	USD FACILITIES MGMT	INS	LC	0.03	NA	13.0
6397-3	SD DEPT OF TRANSPORTATION	INS	LC	0.033	NA	14.3
8222-3	SOUTHEAST FARMERS COOP	COM	PE	0.167	18.4	18.4
8257-3	THEIN WELL CO INC	COM	PE	0.089	1	1
8479-3	KNIFE RIVER	IND	PE	0.133	1.84	1.84
					Total:	48.6
3905-3*	CLAY RURAL WATER SYSTEM INC	RWS	LC	2	NA	868.8
5979-3*	CLAY RURAL WATER SYSTEM INC	RWS	LC	2	307	307
					Total:	1175.8
*Within aquifer boundary delineated by Hedges and others (1982) and Buhler's (2014) UVM:S boundary						
LC Licensed Water Right, PE Water Permit, INS Institutional, COM Commercial, RWS Rural Water System						

There are 84 irrigation water rights/permits appropriating water from the LVM aquifer within Hedges and others (1982) historical aquifer boundary (Water Rights, 2023c). Irrigation water rights/permits have been typically required to report their annual usage on an irrigation questionnaire since 1979. However, due to changes in farming practices and an increase in the number of permits from 43 in 2006 to 71 in 2013, the average over the entire period of record may not be an accurate reflection of average annual irrigation withdrawal at the present time. The average annual withdrawal rate for the LVM aquifer within Hedges and others (1982) historical boundary for irrigation water rights/permits that have reported over the past ten years of record (2012 to 2021) is approximately 3,015 acre-feet per year (Table 3) (Water Rights, 2023a).

There are 55 irrigation water rights/permits appropriating water from the LVM aquifer within Hedges and others (1982) historical aquifer boundary excluding rights/permits within delineation UVM:S aquifer by Buhler (2014) (Water Rights, 2023c). However, due to changes in farming practices and an increase in the number of permits from 27 in 2006 to 45 in 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 annual withdrawal rate for the LVM aquifer

irrigation water rights/permits that have reported over the past ten years of record (2012 to 2021) is approximately 1,866 acre-feet per year (Table 3) (Water Rights, 2023a).

Table 3. Reported irrigation uses from the LVM aquifer for water right/permits within the historical boundary of LVM aquifer, historical boundary of LVM aquifer excluding delineation UVM:S aquifer (Buhler, 2014) (Water Rights, 2023a)

Historical Boundary of LVM aquifer (Hedges and others, 1982)			Historical Boundary of LVM aquifer (Hedges and others, 1982), Excluding UVM:S Aquifer Boundary (Buhler, 2014)		
Year	Number of Permit/License	Annual Pumpage (ac-ft/yr)	Year	Number of Permit/License	Annual Pumpage (ac-ft/yr)
1979	49	1163.0	1979	40	810.5
1980	47	2417.0	1980	38	1995.0
1981	49	1543.0	1981	39	1205.4
1982	37	870.0	1982	27	758.3
1983	38	716.3	1983	28	644.7
1984	47	691.0	1984	37	549.0
1985	46	1328.2	1985	36	927.2
1986	45	1047.5	1986	35	807.5
1987	37	1115.4	1987	27	794.4
1988	38	2083.8	1988	28	1442.4
1989	38	2301.2	1989	28	1522.2
1990	38	2113.2	1990	28	1288.2
1991	39	1670.1	1991	29	1044.1
1992	39	168.8	1992	29	116.7
1993	39	0.0	1993	29	0.0
1994	39	517.3	1994	29	308.7
1995	37	506.6	1995	28	368.2
1996	36	997.6	1996	27	572.9
1997	36	1085.0	1997	27	645.0
1998	36	1032.9	1998	26	736.6
1999	38	900.6	1999	27	698.9
2000	38	2041.7	2000	27	1574.9
2001	38	2037.0	2001	27	1781.8
2002	40	1762.3	2002	29	1123.2
2003	40	1800.6	2003	29	1470.6
2004	39	1747.5	2004	28	1167.6
2005	45	1410.2	2005	28	1071.1
2006	43	2674.5	2006	27	1734.3
2007	50	2909.1	2007	26	1327.0
2008	55	4301.3	2008	28	911.9
2009	58	482.6	2009	30	460.8
2010	59	144.6	2010	30	134.0
2011	62	2195.1	2011	33	1219.4
2012	61	7759.5	2012	33	3355.3
2013	71	4109.1	2013	45	2856.5
2014	75	1576.3	2014	48	1006.4
2015	78	1925.8	2015	50	1473.5
2016	79	2187.5	2016	51	1779.0
2017	79	3156.6	2017	52	2439.3
2018	79	427.7	2018	52	419.4
2019	79	339.6	2019	52	333.0
2020	78	3353.2	2020	51	1972.5
2021	80	5316.2	2021	54	3026.7
Average 1979-2021		1812.2	Average 1979-2021		1159.9
Average 2012-2021		3015.2	Average 2012-2021		1866.2

Application No. 8692-3 is requesting to irrigate 120 acres (Water Rights, 2023c). Generally, irrigators in eastern South Dakota apply less than one foot of water per acre per year. However, to account for 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 average annual withdrawal rate for this irrigation water permit application. Therefore, the estimated average annual withdrawal rate for Application No. 8692-3 is approximately 120 acre-feet per year. There were four water permits approved in 2022 (Nos. 8632-3, 8589-3, 8641-3, and 8672-3) and one other pending application in 2023 (8680-3) that were not included in the irrigation questionnaire compilation and need to be accounted for. The new permits are authorized to irrigate 492 acres, while the pending application, not including this application, proposes to irrigate 70 acres. All together a total of 562 acres are planned to be irrigated (Water Rights, 2023c). Assuming one foot of water per acre per year, the withdrawal rate for these five water permits/applications is approximately 562 acre-feet per year. The average annual withdrawal rate for irrigation appropriations from 2012 to 2021 combined with 2022 permits and new applications, including this one, within Hedges and others (1982) historical aquifer boundary, is approximately 3,697 acre-feet per year (Table 3) (Water Rights, 2023a). The average annual withdrawal rate for irrigation appropriations from 2012 to 2021 combined with 2022 permits and new applications, including this one, within Hedges and others (1982) historical aquifer boundary excluding rights/permits within delineation UVM:S aquifer by Buhler (2014), is approximately 2,548 acre-feet per year (Table 3) (Water Rights, 2023a).

There are domestic wells completed into the LVM aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2023d). Due to their relatively low diversion rates, withdrawals from domestic wells are not considered to be a significant portion of the hydrologic budget. Additionally, with the development of rural water systems in areas where the LVM aquifer is the uppermost aquifer available; it is likely some domestic users may have transitioned to rural water. Therefore, the quantity of water withdrawn by domestic wells is estimated to be negligible to the hydrologic budget for the LVM aquifer.

Hydrologic Budget Summary

The average annual recharge rate for the unconfined portion LVM aquifer is approximately 4,580 acre-feet/year. The average annual recharge rate for the confined portion LVM aquifer is approximately 1,960 acre-feet/year. Combining average annual recharge rate both the confined and unconfined portions of the LVM aquifer, the average annual recharge rate is approximately 6,540 acre-feet per year.

The average annual withdrawal rate from the LVM aquifer within Hedges and others (1982) historical aquifer boundary (the non-irrigation appropriations (1,224 acre-feet/year); the average annual withdrawal rate for irrigation appropriations from 2012 to 2021, 2022 water permits, and new applications, including this one, (3,697 acre-feet/year)) is approximately 4,921 acre-feet per year (Water Rights, 2023a).

The average annual withdrawal rate from the LVM aquifer within Hedges and others (1982) historical aquifer boundary excluding rights/permits within delineation UVM:S aquifer by

Buhler (2014) (the non-irrigation appropriations (49 acre-feet/year); the average annual withdrawal rate for irrigation appropriations from 2012 to 2021, 2023 water permits, and new applications, including this one, (2,548 acre-feet/year)) is approximately 2,597 acre-feet per year (Water Rights, 2023a).

Collectively, the average annual recharge rate for both the confined and unconfined portions of the LVM aquifer is greater than the average annual withdrawal rate from the LVM aquifer within Hedges and others (1982) historical aquifer boundary as well as the Buhler (2014) boundary delineation. Based on the hydrologic budget, there is a reasonable probability unappropriated water is available from the LVM aquifer for the proposed appropriation.

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.

The DANR-Water Rights Program monitors ten observation wells completed into the LVM aquifer with two additional observation wells (CL-80J and CL-66AR) that are within both the historic aquifer boundary delineated by Hedges and others (1982) and Upper Vermillion Missouri: South aquifer boundary as defined by Buhler (2014), with observation wells in the area of this application shown on Figure 5 (Water Rights, 2023b). These observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. The three closest observation wells to the diversion point are UN-77I (approximately 1.3 miles northwest), UN-77H (approximately 1.8 miles northeast), and UN-77K (approximately 2.5 miles southeast) (Water Rights, 2023b). The hydrographs for these observation wells are displayed in Figures 2 to 4 respectively (Water Rights, 2023b). 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 DANR Water Rights Observation Well on hydrographs.

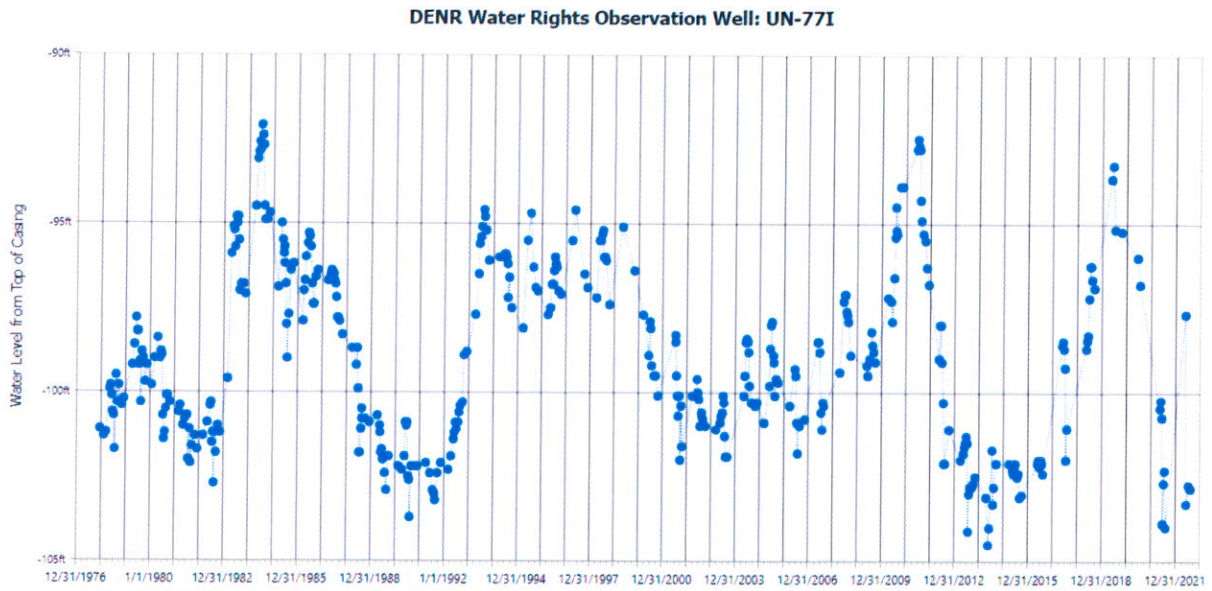


Figure 2. Hydrograph for observation well UN-77I (Water Rights, 2023b)

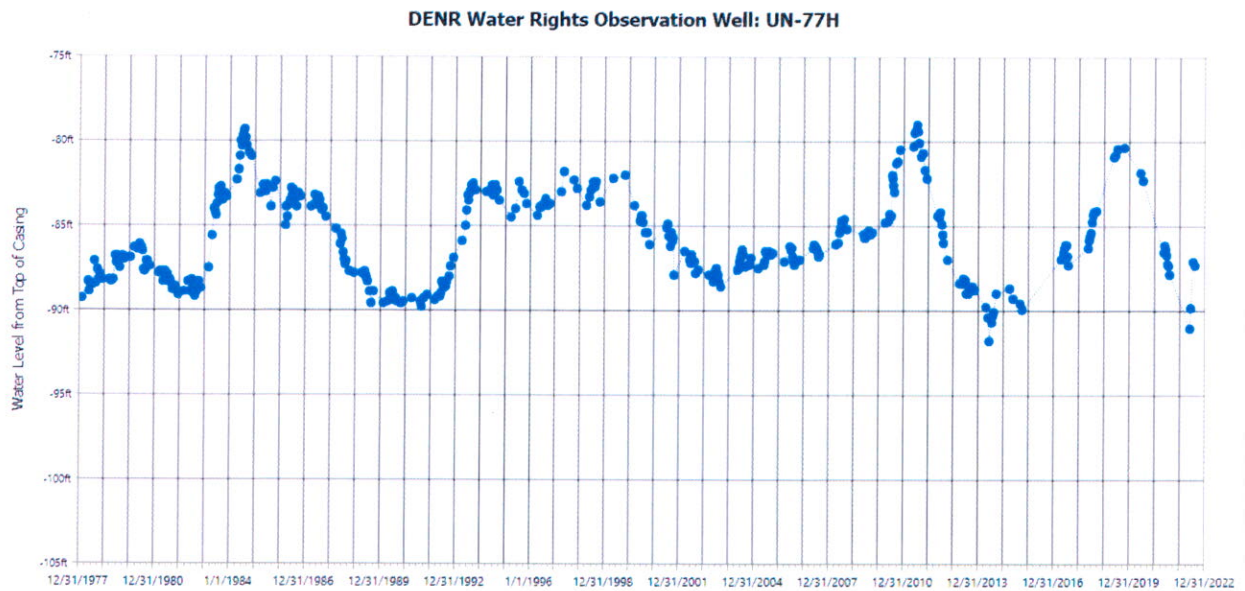


Figure 3. Hydrograph for observation well UN-77H (Water Rights, 2023b)

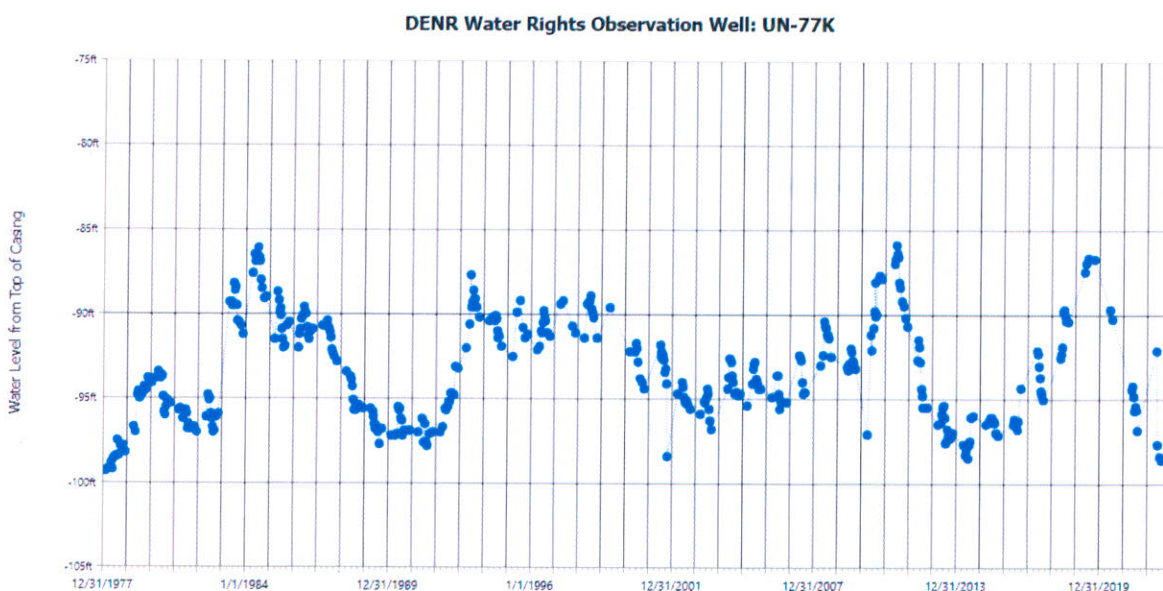


Figure 4. Hydrograph for observation well UN-77K (Water Rights, 2023b)

A majority of the observation wells in the LVM aquifer have a stable trend in the water level. The data shown on Figures 2, 3, & 4 share a similar trend with most of the other observation wells in the LVM aquifer. The hydrographs for the LVM aquifer observation wells indicate that the aquifer responds well to climatic conditions because water levels are rising during wetter periods (early spring snowmelt and precipitation) 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 water levels 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 LVM 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.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, 62 water rights/permits are authorized to appropriate water from the LVM aquifer, partially shown on Figure 5, within the historic boundary of the aquifer mapped by Hedges and others (1982) excluding the area of the UVM:S as delineated by Buhler (2014) (Water Rights, 2023c). Table 4 lists nearby water rights/permits that are shown on Figure 5. The closest water right/permit to the diversion point for this application is Water Right No. 4393-3 which is held by Lyle A. Wagner. The diversion point for Water Right No. 4393-3 is located approximately 0.4 miles southwest of the proposed diversion point for this application (Water Rights, 2023c).

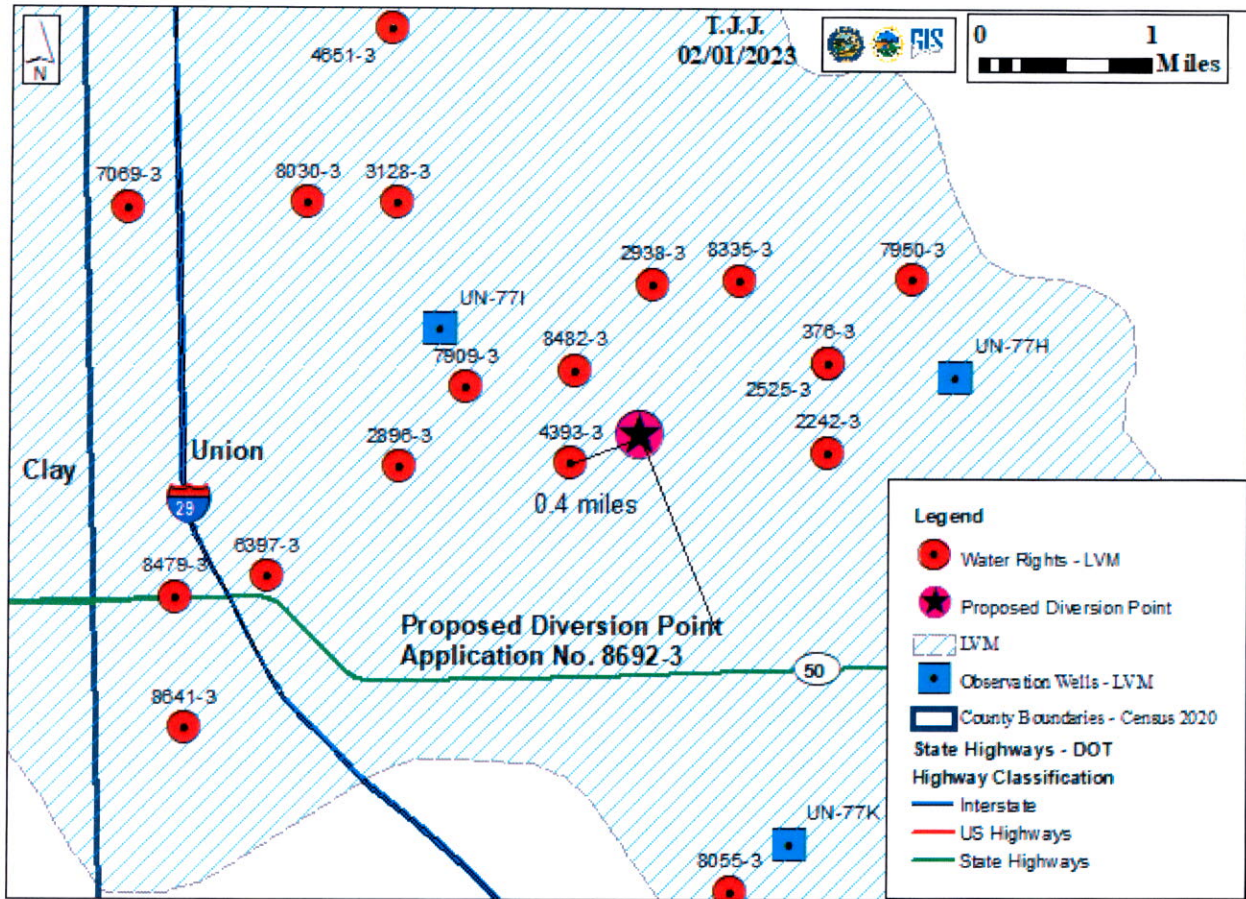


Figure 5. Map of the proposed diversion point for Water Permit Application No. 8692-3 and nearby LVM aquifer water rights/permits and observation wells (Water Rights, 2023b and 2023c).

Table 4. Water right/permits in Figure 5 (Water Rights, 2023c)

Permit	Name/Business	Priority	Status	Use Type	CFS	Acres
376-3	Virginia Quam	12/26/1956	License	Irrigation	2.28	160
2242-3	Gerald B Hanson	04/03/1975	License	Irrigation	1.95	136
2525-3	Virginia Quam	02/04/1976	License	Irrigation	1.94	136
2896-3	Lyle A Wagner	08/17/1976	License	Irrigation	2.23	265
2938-3	Maxine Bird	09/07/1976	License	Irrigation	1.94	136
3128-3	Eric R Abraham	10/14/1976	License	Irrigation	1.85	130
4393-3	Lyle A Wagner	03/01/1979	License	Irrigation	1.71	120
4651-3	Donald R Abraham	02/20/1981	License	Irrigation	1.72	121
6397-3	SD Dept. of Transportation	02/18/2003	License	Institutional	0.033	0
7069-3	Kelly O'Connor	09/15/2008	License	Irrigation	5.33	405
7909-3	Scott Wagner	09/16/2013	License	Irrigation	1.89	157
7950-3	Luverne Hanson	01/24/2014	Permit	Irrigation	1.78	150
8030-3	Reid Brid	06/16/2014	Permit	Irrigation	1.78	140
8055-3	Tarn Vieira	09/24/2014	Permit	Irrigation	0.27	40
8335-3	Dakota Eastern Inc	03/01/2018	Permit	Irrigation	1.84	158
8479-3	Knife River	01/15/2021	Permit	Industrial	0.133	0
8482-3	Reid Bird	01/29/2021	Permit	Irrigation	1.56	116
8641-3	Derrick Skogsberg	06/24/2022	Permit	Irrigation	1.78	160

There are domestic wells on file with the DANR-Water Rights Program that are completed into the LVM aquifer, with the closest domestic well on file (not held by the applicant) approximately 0.14 miles southeast of the diversion point (Water Rights, 2023d). There could potentially be other domestic wells completed into the LVM aquifer near the diversion point that are not on file with the DANR-Water Rights Program.

The LVM aquifer is primarily under confined conditions, but it can be found to be locally unconfined near the Vermillion River. Based on well completion reports near the proposed diversion point for this application, it is expected to be under confined conditions. In a confined aquifer, drawdown from a pumping well can extend some distance from the well. 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 LVM 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)), history of irrigation in the area without any recent complaints of well interference (Water Rights, 2023e), the saturated aquifer thickness near the diversion point, any drawdown created from the 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.

SDCL 46-5-6:

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of 1.0 cfs per 70 acres or “the equivalent thereof.” The statute does provide that: “The Water Management Board may allow a greater diversion, in volume or rate or both, if the method of irrigation, any time constraints on diversion of water, or the type of soil so requires...”

If approved, Water Permit Application No. 8692-3 would authorize a maximum instantaneous diversion rate equating to 1.04 cfs per 70 acres from one well for the irrigation. The applicant did not provide a reason for exceedance, but it appears to be due to the center pivot doing a partial rotation. For example, a center pivot requires 1.78 cfs to operate regardless of swinging a partial or full circle. This reason has been acceptable to the Water Rights Program and the Water Management Board in the past.

CONCLUSIONS:

1. Water Permit Application No. 8692-3 proposes to appropriate 1.78 cfs of water for irrigation of 120 acres from one proposed well to be completed into the LVM aquifer. The site of interest is located approximately 8 miles northwest of Elk Point, SD.
2. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the LVM aquifer to supply the proposed appropriation.
3. There is a reasonable probability that the diversion by Water Permit Application No. 8692-3 will not unlawfully impair adequate wells for existing water rights/permits and domestic uses.
4. The applicant is requesting a diversion rate greater than statutory limit of 1 cfs per 70 acres likely to accommodate a center pivot doing a partial rotation. This is reasonable and has been accepted by the Water Management Board and the Water Rights Program in the past.



Tyler Jensen
Natural Resources Engineer I
SD DANR - Water Rights Program



Adam Mathiowetz, PE
Natural Resources Engineer IV
SD DANR -Water Rights Program

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

February 14, 2023

Reid Bird
31605 473rd Ave
Elk Point SD 57025

Dear Mr. Bird:

Water Permit Application No. 8692-3 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 Leader-Courier printed at Elk Point SD (Ph # 605 356-2632) and the Press & Dakotan printed at Yankton SD (Ph # 605 665-7811). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspapers to authorize publication of your Notice and to arrange for payment. Early contact with the papers can eliminate delays. Upon receiving authorization from you, the publisher has 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. 8692-3 to Appropriate Water

Notice is given that Reid Bird 31605 473rd Ave, Elk Point SD 57025 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Lower Vermillion Missouri Aquifer (approximately 200 feet deep) located in the NW 1/4 SW 1/4 Section 10 for irrigation of 120 acres located in the SW 1/4 Section 10; all in T92N-R50W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 8 miles northwest of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8692-3 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 March 6, 2023.

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

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by March 6, 2023.

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

Published once at the total approximate cost of_

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, February 14, 2023 10:36 AM
To: Cassandra Brockmoller
Subject: 8692-3, Reid Bird
Attachments: 8692-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on February 23, 2023.

Reid Bird, 31605 473rd Ave, Elk Point SD 57025 (712 251-6343) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

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



Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, February 14, 2023 10:36 AM
To: Shannon Jost
Subject: 8692-3, Reid Bird
Attachments: 8692-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on February 23, 2023 in the Leader-Courier.

Reid Bird, 31605 473rd Ave, Elk Point SD 57025 (712 251-6343) 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>



AFFIDAVIT OF PUBLICATION

RECEIVED

MAR 06 2023

State of South Dakota)

:SS

County of Union)

OFFICE OF
WATER

Shannon L. Jost,

the publisher of the Leader-Courier, deposes and says that

The Leader-Courier

is a legal weekly newspaper of a general circulation, printed and published in Elk Point, County of Union, State of South Dakota, and has been such legal newspaper during the time hereinafter mentioned, and that affiant is and was during all the time hereinafter mentioned in charge of the advertising department thereof, and has personal knowledge of all the facts stated in this affidavit: and that the notice and advertisement headed:

Water Rights 8692-3

Reid Bird

a printed copy of which is hereunto attached and made a part hereof, was printed and published in the said newspaper at least once in

each week for 1 successive weeks; that said newspaper at the time of the first publication of said notice hereinafter stated, had, and still has, a bona fide circulation of over two hundred paid copies weekly, and had been published in the said County of Union for more than one year immediately prior to the date of the said publication of said notice, and that said newspaper during said times, was, and is, printed in part in an office maintained at said city of Elk Point, the said place of publication; that the first publication of said notice in said newspaper was

on Thursday, the 23 day of February, 2023

and that the succeeding publications were

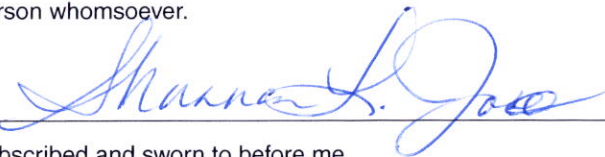
on Thursday, the _____ day of _____,

on Thursday, the _____ day of _____,

on Thursday, the _____ day of _____,

that the fees for the printing and publishing of said notice and advertisement in said newspaper as aforesaid were

\$ 41.95, that the full amount of the fee charged insures to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.


Subscribed and sworn to before me

this 23 day of February, 2023



Notary Public

NOTICE OF

APPLICATION

NO. 8692-3 TO

APPROPRIATE WATER

Notice is given that Reid Bird, 31605 473rd Ave, Elk Point SD 57025 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Lower Vermilion Missouri Aquifer (approximately 200 feet deep) located in the NW 1/4 SW 1/4 Section 10 for irrigation of 120 acres located in the SW 1/4 Section 10; all in T92N-R50W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 8 miles northwest of Elk Point SD.

Pursuant to SDCL 46-2A-2,

the Chief Engineer recommends APPROVAL of Application No. 8692-3 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 Duval 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 March 6, 2023.

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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. Publish February 23, 2023

Published once at the total approximate cost of \$41.95 and may be viewed free of charge at www.sdpublicnotices.com 8-3-130

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED

FEB 27 2023

OFFICE OF
WATER

REID BIRD
31605 473RD AVENUE
ELK POINT SD 57025

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

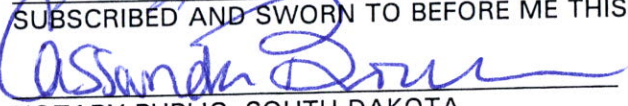
KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND 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 23rd DAY OF February, 2023
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$40.64 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: 02/23/2023

FILED ON: 02/23/2023


SUBSCRIBED AND SWORN TO BEFORE ME THIS 23rd DAY OF February, 2023


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

Ad text : NOTICE OF APPLICATION
NO. 8692-3 to Appropriate Water

Notice is given that Reid Bird, 31605 473rd Ave, Elk Point SD 57025 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Lower Vermillion Missouri Aquifer (approximately 200 feet deep) located in the NW 1/4 SW 1/4 Section 10 for irrigation of 120 acres located in the SW 1/4 Section 10; all in T92N-R50W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately 8 miles northwest of Elk Point SD.

RECEIVED

FEB 27 2023

**OFFICE OF
WATER**

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8692-3 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 Engineers 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.

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Published once at the total approximate cost of \$40.64 and can be viewed free of charge at www.sdpublicnotices.com.

Published February 23, 2023.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, February 14, 2023 10:43 AM
To: reidbird@empireag.net
Subject: Water Permit Application No. 8692-3
Attachments: 4900.pdf

Attached is a copy of the report, chief engineer recommendation and information regarding the public notice for your water permit application. As stated in the letter, please contact the paper(s) as soon as possible to authorize publication and arrange for payment. This information is being mailed to you today.

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

MAR 27 2023

Reid Bird
31605 473rd Avenue
Elk Point SD 57025

Dear Mr. Bird:

Enclosed is Water Permit No. 8692-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

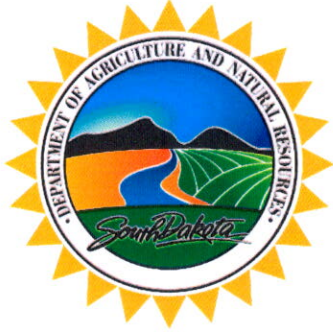
Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the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

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

Sincerely,

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

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

**Affidavit of Public Notice
on DANR Website**

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

Application No.: 8692-3

Name of Applicant: Reid Bird

Date of Posting: 2/21/2023

Date of Removal: 3/27/2023

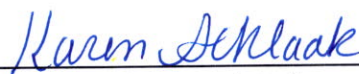


Ron Duvall, Water Rights Permitting Administrator

3/27/23

Date

Subscribed and sworn to before me, a notary public, this 27th day of March, 2023.



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

