

WATER PERMIT NO. 8519-3

Name of Applicant: **Melvin Donnelly**

Address: **47273 324th St, Elk Point SD 57025**

Phone: **712 389-0090**

Amount of Water Claimed: **1.78 cfs**

Total Acres: **70**

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

Water to be used for: **irrigation**

County: **Union**

Type of Waste Disposal System:

Location: **1 mile northwest of Elk Point**

PRIORITY

Date Received: **5-27-21**

Application/License Fee: **\$ 950**

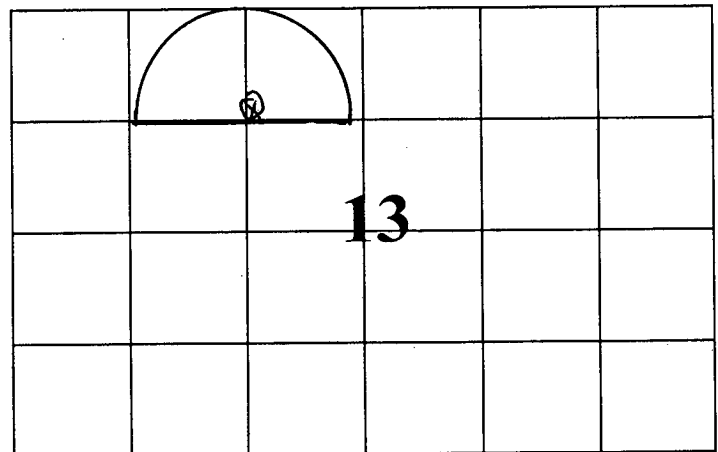
Corrected Application Received: **6-10-21**

Period of Annual Use: **April 1 – Sept 30**

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

Diversion Point: **NE 1/4 NW 1/4 Sec 13-T91N-R50W**

Land to be Irrigated: **N 1/2 NW 1/4 Sec 13-T91N-R50W**



Depth of Well: **115 feet deep**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **6-10-21**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8519-3**

Date of first receipt of application May 27, 2021.

Date of return to applicant for corrections, amendments or changes June 1, 2021.

Date of receipt of corrected application June 10, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8519-3 to Melvin Donnelly, 47273 324th St, 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. 8519-3 appropriates 1.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri:Elk Point Aquifer (approximately 115 feet deep) located near the center of the NW 1/4 Section 13 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 13; all in T91N-R50W. This site is located approximately one mile 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 May 27, 2021.
4. The date of approval of Permit No. 8519-3 is August 30, 2021.
5. One-fifth of the construction is to be completed on or before March 1, 2024.
6. All construction is to be completed on or before August 30, 2026.
7. Water is to be put to beneficial use on or before August 30, 2030.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8519-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals under this Permit 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. 8519-3 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. 8519-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 70 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

SEP 08 2021

date



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

RECEIVED

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8519-3</u> (office use only)	MAY 27 2021	PAID WATER RIGHTS PROGRAM MAY 27 2021 Ck# <u>9382</u>
	Hydrologic Unit <u>10170101</u>		
	Basin <u>Missouri River</u>		
	Newspaper <u>Leader-Courier</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 Melvin Donnelly

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

Mailing Address 47273 324th. St. Elk Point ☒ SD ☒ 57025
(Address) (City) (State) (Zip Code)

Phone 712-389-0090 Mobile _____ Email melvindonnelly@hotmail.com

2. Amount of water claimed 1.78 *CFS or 800 **GPM _____ ***AF Total Acreage 70
(*Cubic Feet per Second) (**Gallons per Minute) (***) Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Missouri:Elk Point Aquifer4. Location of point of diversion 1 well in Ne of NW 1/4 of Section 13, T91N, R50w

(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Union ☒5. County or counties where water will be used Union6. 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
Nw of Nw, Sect 13, T91n R50w	35		
Ne of Nw, Sect 13, T91n R50w	35		

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

Center pivot irrigation of the above listed properties. Greater than statutory limit of water requested due to soil type.

I, Melvin Donnelly, 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) 115 Depth to Top of Water Bearing Material 50 Depth to Water from Surface 20d) Distance to nearest domestic well on applicant's property >1200 Property owned by others >1200**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)

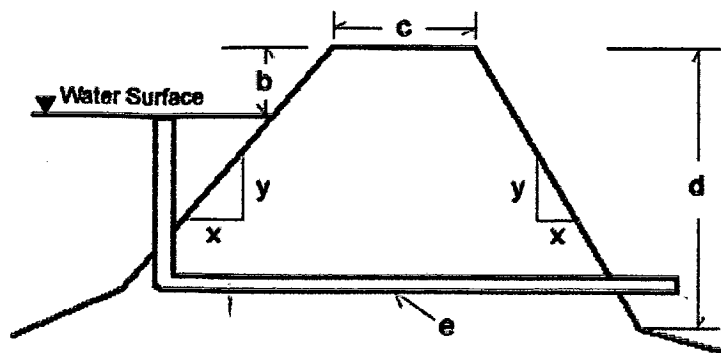
Upstream _____

Downstream _____

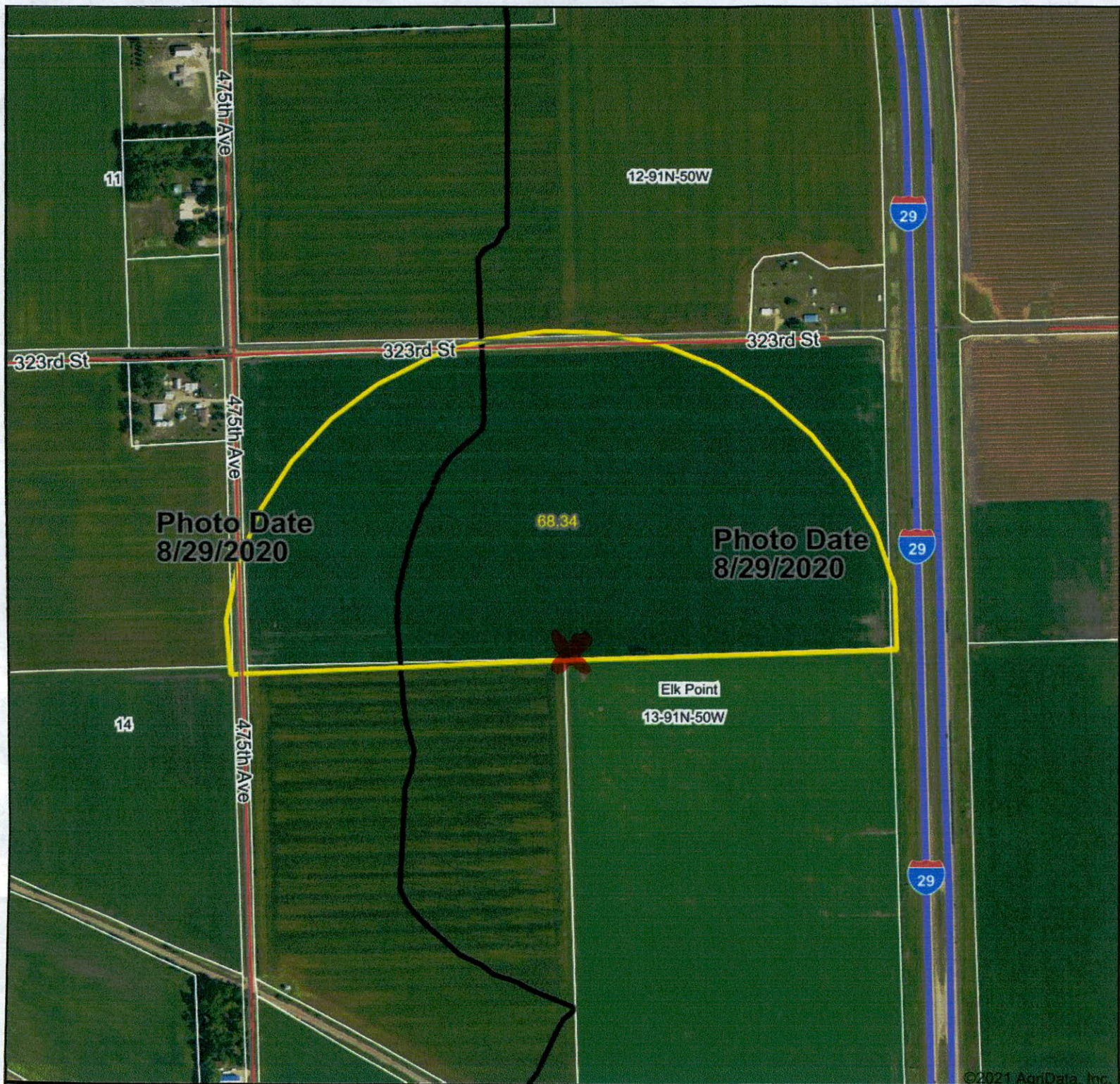
h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



Aerial Map



©2021 AgriData, Inc.

Nutrien
Ag Solutions™

Maps Provided By:
 **surety**
CUSTOMIZED ONLINE MAPPING
© AgriData, Inc. 2021 www.AgriDataInc.com

Map Center: 42° 42' 15.65, -96° 42' 9.81

0ft 643ft 1286ft

13-91N-50W
Union County
South Dakota

RECEIVED

JUN 10 2021

WATER RIGHTS
PROGRAM



5/22/2021

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

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date May 27, 2021

RECEIVED OF Mr. or Mrs. Melvin Donnelly 47273 324th St Elk Point SD 57025

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

Fee for Application for Permit No. <u>8519-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>750.00</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>8519-3</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>950.00</u>

By *Eric Gronlund*
Chief Engineer
Ume



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

June 1, 2021

Melvin Donnelly
47273 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

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

- Enclosed is the aerial photo map submitted with your application. On the map, please mark the proposed well location with an "X". A postage prepaid envelope is enclosed for your use.

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



**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. 8519-3, Melvin Donnelly**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8519-3, Melvin Donnelly, 47273 324th St, Elk Point SD 57025.

The Chief Engineer is recommending APPROVAL of Application No. 8519-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under Water Permit No. 8519-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals under this Permit 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. 8519-3 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. 8519-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 70 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

August 5, 2021

REPORT TO THE CHIEF ENGINEER
WATER PERMIT APPLICATION NO. 8519-3
MELVIN DONNELLY
JULY 20, 2021

Water Permit Application No. 8519-3 proposes to appropriate water, for the irrigation of 70 acres, at a maximum instantaneous diversion rate of 1.78 cubic feet per second (cfs) from the Missouri: Elk Point aquifer. The applicant intends to divert water from a single well, approximately 115 feet-deep, to be located near the center of NW $\frac{1}{4}$ with the irrigated acres located in the N $\frac{1}{2}$ NW $\frac{1}{4}$; all in Section 13, T91N-R50W. The site is located approximately one mile northwest of Elk Point, SD. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

AQUIFER: Missouri: Elk Point (M: EP)

Aquifer Characteristics

The Missouri: Elk Point aquifer is a deposit of glacial outwash composed of fine sand to very coarse gravel (Niehus, 1994). It underlies approximately 219,100 acres of Yankton, Clay, and Union counties (Figure 1) with an estimated 3,287,100 million acre-feet of recoverable water in storage (Hedges et al., 1982). It is hydraulically connected to the Lower Vermillion Missouri and Lower James Missouri aquifers, and the Missouri, Vermillion, and Big Sioux Rivers (Niehus, 1994; Stephens, 1967). The movement of groundwater within the aquifer is generally from the northwest to the southeast, and towards the Missouri River (Stephens, 1967). Both confined and unconfined groundwater conditions are present in the aquifer (Niehus, 1994; Stephens, 1967). Existing well completion reports in the vicinity of the proposed application show an average of 46 feet of silty, sandy clay overlying water bearing sand with gravel with an average depth to the groundwater surface of 17 feet (Water Rights, 2021a and 2021b). This indicates an average of 29 feet of artesian head pressure in the vicinity of the application. The proposed site is under confined conditions.

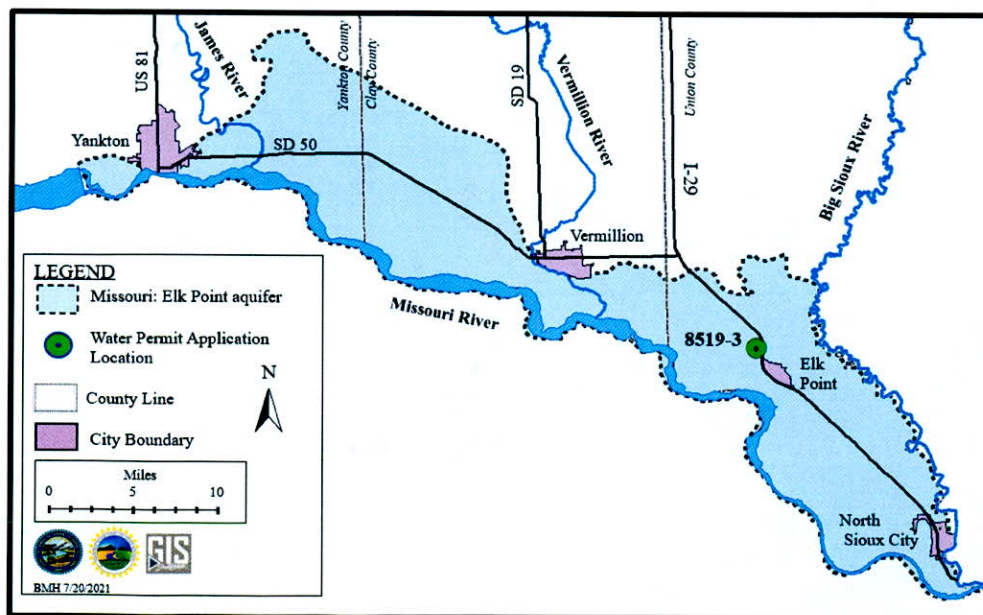


Figure 1. Water Permit Application No. 8519-3 shown within the Missouri: Elk Point aquifer boundary (modified from: Hedges et al., 1982).

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 reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights, and that the proposed use is a beneficial use and in the public interest. This report will address water availability and potential for unlawful impairment of existing water rights within the Missouri: Elk Point aquifer.

WATER AVAILABILITY

Water Permit Application No. 8519-3 proposes to appropriate water from the Missouri: Elk Point aquifer. The probability of unappropriated water being available from an 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..." If the source of the water is older or lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board need not consider the balance of recharge to and withdrawal from the aquifer. For this application, a water distribution system is not involved and the aquifer is not older or lower than the Greenhorn Formation; therefore, the balance of recharge and withdrawal must be considered.

Hydrologic Budget

Recharge:

The Missouri: Elk Point aquifer is recharged by infiltration of precipitation where the aquifer is at or near the land surface, inflow from the Lower Vermillion Missouri and Lower James Missouri aquifers, and seepage from the Missouri, Vermillion, James, and Big Sioux Rivers (Bugliosi, 1983; Niehus, 1994). Recharge to the aquifer was estimated by Hedges et al. (1985) to be approximately 3.8 inches per year. With the areal extent of the aquifer estimated at 219,100 acres, the annual recharge rate can be estimated at 69,382 acre-feet/year (ac-ft/yr). Stephens (1967) noted that pumping of the aquifer will induce recharge from the Missouri River. Stonesifer (2013) estimated that the Missouri River contributed 22,582 ac-ft/yr of recharge due to the pumping operation of the Lewis and Clark Rural Water System (RWS). This estimate is based off inducing at least 50% recharge of the water pumped at full development of the existing and future use permits held by Lewis & Clark RWS. Depending on location and diversion rate, this percentage of induced recharge is likely to be much greater than 50% (Mathiowetz, 2020). This results in a total estimated annual recharge of approximately 92,000 ac-ft/yr for the Missouri: Elk Point aquifer. There are other wells, both domestic and appropriative, in close vicinity to the Missouri River that can induce recharge from the river, but that amount of induced recharge has not been estimated.

Discharge:

Discharge from the Missouri: Elk Point aquifer occurs through evapotranspiration in areas where the aquifer is at or near the land surface, well withdrawals, leakage to the underlying Dakota aquifer and outflow to the Missouri and Big Sioux Rivers (Bugliosi, 1986; Niehus, 1994). Currently, there are a total of 629 water rights/permits (39 non-irrigation, 585 irrigation, and 5 future use) appropriating water from the Missouri: Elk point aquifer (Water Rights, 2021a). A summary of the non-irrigation water rights/permits are listed in Table 1. The total estimated volume of water to be withdrawn can be determined by assuming that water rights/permits limited

by an annual volume will pump the entire volume appropriated annually or that water rights/permits limited by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time.

Water Permit No. 7059-3 is for recreational use for maintaining the water level of a small lake with a surface area of 17.6 acres. It is assumed that the only consumptive use of this water is due to evaporation (Farmer, 2018). Annual evaporation of water from shallow lakes is estimated to be 42 inches per year at this location (NOAA, 1982) and average annual total precipitation at the Sioux City, IA airport was determined to be 27.74 inches over the 30 year period of 1981 to 2010 (Arguez et al, 2010), resulting in an approximate use of 20.9 ac-ft per year .

The total estimated volume of 48,361 ac-ft/yr, shown in Table 1, also takes into consideration the thirteen non-irrigation permits that are required to report their annual usage from the Missouri: Elk Point aquifer. The full authorized appropriation of nine of these permits, either limited by an annual volume or a diversion rate, are shown in Table 1. Five are commercial use permits (8031-3, 8381-3, 8403-3, 8415-3, and 8435-3) that are currently under development and, due to no history of reported use, their combined estimated use of 163 ac-ft/yr, is included in Table 1. Permit No. 8147-3, is a commercial use permit, limited by an annual volume of 160 ac-ft/yr. Lewis and Clark RWS appropriates 32,165 ac-ft/yr from Permit Nos. 6736-3 (20,165 ac-ft/yr) and 7207-3 (12,000 ac-ft/yr). Even though the average reported pumping rate is 13,514 ac-ft/yr (Water Rights, 2012-2020) this system is continually undergoing development, as a result, their full authorized appropriation is included in Table 1. The City of Yankton is limited by an annual volume of 6,050 ac-ft/yr of water under municipal use Permit No. 8212-3. The Clay RWS maintains Permit Nos. 5998A-3 and 7388-3, which combine to appropriate 1,286.8 ac-ft/yr. However, the average reported use of 322 ac-ft/yr, from 2012-2020, it is relatively stable, not increasing, and is considered most reflective of the infrastructure currently in place for these two permits (Water Rights, 2012-2020). Permit No. 7388-3 is authorized to withdraw an estimated total of 869 ac-ft/yr, assuming a 60 percent pumping rate. Permit No. 5998A-3, permitted for turf irrigation and domestic use, is required to report its total annual use as a non-irrigation permit due to serving several homes in a housing development (Water Rights, 2021a). The estimated volume for this permit is included here, rather than with the other turf permits, because it has an annual reported use. The City of Vermillion has two permits (Permit No. 147-3 appropriating 1,156 ac-ft/yr assuming a 60 percent pumping rate, and Permit No. 6236-3 limited annually to 1,161 ac-ft/yr) authorized to appropriate a combined 2,317 ac-ft/yr. However, an average value of 1,219 ac-ft/yr reported from 2006-2020, is considered more reflective of the actual use (Water Rights, 2006-2020). Therefore, this total estimated volume of 48,361 ac-ft/yr will be included in the water balance for non-irrigation permits.

Report on Water Permit Application No. 8519-3

Table 1. Non-irrigation water rights/permits from the Missouri: Elk Point aquifer with permitted appropriation and estimated volume water use (Water Rights, 2006-2020, 2011-2020 and 2021a, Drinking Water 2021).

Estimated Volume Water use (Water Rights, 2006-2020, 2011-2020 and 2021a, Drinking water 2021).						
Permit No.	Name	Appropriation limited by Annual Volume (ac-ft/yr)	Appropriation limited by Diversion Rate (cfs)	Total Estimated Volume (ac-ft/yr)	Use ^d	Status ^d
4501-3	EDDIE WOHL		0.05	22	COM	LC
5616-3	CIMPLS INC		0.44	191		
5827-3	DON LANTIS		0.02	10		
5953-3	H & K OIL CO		0.04	16		
6151-3	VERNON & NORMA VAKOC		0.67	291		
6580-3	WEST SHORE ACRES LLC		0.10	43		
8031-3	DAKOTA PROTEIN CONVERSION INC		0.22	96		PE
8147-3	DOUG LAFLEUR	160		160		
8381-3	R P CONSTRUCTORS	1		1		
8403-3	STOCKMEN'S LIVESTOCK INC	40		40		
8415-3	RC INVESTMENTS LLC	25		25		
8435-3	SIOUX CITY INSULATION	1		1		
6744-3	JUDITH I GRANT		0.78	339	DOM	
7388-3	CLAY RURAL WATER SYSTEM INC ^a		2.00	322		
5998A-3			2.22		IRR	
7059-3	WE INVESTMENTS LLC ^b		3.11	21	REC	
6736-3	LEWIS & CLARK RWS	20,165		20,165	RWS	
7207-3	LEWIS & CLARK RWS	12,000		12,000		
5490-3	US GEOLOGICAL SURVEY		0.09	39	FWP	LC
5907-3	US FISH/WILDLIFE SERVICE		3.78	1,642		
6733-3	US FISH/WILDLIFE SERVICE		1.11	482		
7094-3	US FISH/WILDLIFE SERVICE		2.67	1,160		
5021-3	VISHAY-DALE ELECTRONICS INC		0.10	43	IND	
5388-3	L G EVERIST INC		0.45	195		
5453-3	AALADIN INDUSTRIES INC		0.05	22		
5593-3	VISHAY-DALE ELECTRONICS INC		0.06	24		
6170-3	CONCRETE MATERIALS		0.22	96		
1255-3	CITY OF ELK POINT		1.13	491	MUN	
143-3	CITY OF VERMILLION		1.78	773		
147-3	CITY OF VERMILLION ^a		2.66	1,219		
6236-3		1,161				
1965-3	TOWN OF GAYVILLE ^c		0.37	0		
4207-3	TOWN OF JEFFERSON		0.90	391		
5118-3	TOWN OF GAYVILLE ^c		0.33	0		
5437-3	DAKOTA DUNES IMPROVEMENT DIST.		3.33	1,447		
5782-3	CITY OF NORTH SIOUX CITY		1.14	495		
6354-3	CITY OF VERMILLION		0.02	10		
8212-3	CITY OF YANKTON	6,050		6,050	SHD	
5581-3	LARSON'S LANDING		0.09	39		
5592-3	EAST WINDS COURT INC ^c		0.11	0		
Total:				48,361		
a - the total estimated volume for these permits is an average value from yearly non-irrigation questionnaires (Water Rights, 2006-2020 and Water Rights, 2011-2020)						
b – this value represents evaporation, the only consumptive use for this permit						
c - these permits all purchase water from a rural water system and maintain their water right for a standby use (Drinking Water, 2021). Therefore, their volume use is considered zero.						
d - COM: Commercial; DOM: Domestic; IRR: Irrigation, REC: Recreation; FWP: Fish & Wildlife Propagation; IND: Industrial; MUN: Municipal; SHD: Suburban Housing Development; LC: License; PE: Permit						

Well withdrawals from the Missouri: Elk Point aquifer are also for irrigation use with actual pumpage from the aquifer reported to the DANR-Water Rights Program through annual irrigation questionnaires. Currently, there are 585 irrigation water rights/permits with 81,623 total permitted acres for irrigation (Water Rights, 2021a). Figure 2 shows the historical relation between annual permitted acres with actual pumpage reported from annual irrigation summaries. Historically, the average annual reported pumping is approximately 19,031 ac-ft/yr (Water Rights, 1979-2020). However, this is not necessarily reflective of the increased pumpage from aquifer development, beginning in 2006, and development of separate application rates for crop and turf irrigation.

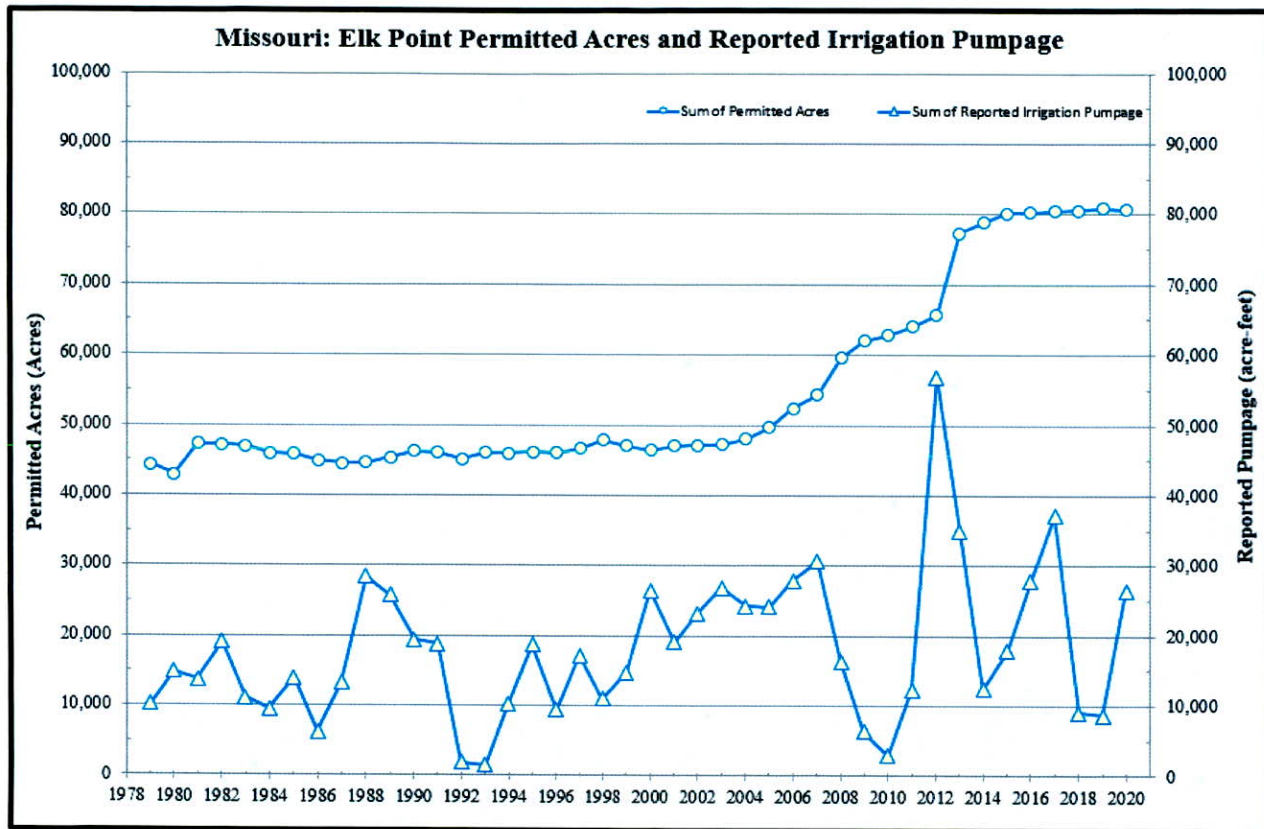


Figure 2. Permitted acres and reported irrigation for the Missouri: Elk Point aquifer (Water Rights, 2021a, Water Rights 1979-2020)

Farmer (2018a) estimated that an average application rate of 0.35 acre-feet per permitted acre can be utilized to estimate annual use for both crop and turf irrigation. Farmer (2018b) later established that turf irrigation should be determined separately because they tend to utilize their full authorized allowance for appropriation. Farmer (2021) estimated a rate of 0.97 ft/yr for turf irrigation and 0.343 ft/yr for crop irrigation. Table 2 contains the turf irrigation permits with permitted acres and an estimated annual volume use based on the Farmer (2021) application rate. Subsequently, the calculation for estimated annual use for crop irrigation requires adjustment because the 738 acres for turf irrigation need to be removed from the 81,623 total permitted acres. This results in a value of 80,885 acres for crop irrigation and, after applying the application rate of 0.343 ft/yr, yields approximately 27,744 ac-ft/yr. Summing turf (425 ac-ft/yr) and crop (27,744 ac-ft/yr) irrigation

volume estimates yields a value of 28,169 ac-ft/yr to be included in the water balance section for irrigation permits.

Table 2. Water rights/permits for irrigation on turf (Water Rights, 2021a).

Permit Number	Name	Acres	Estimated Volume (ac-ft/yr)
1294-3	Recreation Development Association, Inc.	102.0	98.9
2011-3	Two Rivers Golf Club	95.0	92.2
5786-3	Dakota Dunes Golf Course	173.0	167.8
5935-3	Ted Waitt	1.0	1.0
5936-3	Applied Engineering, Inc.	1.8	1.7
7225-3	National Field Archery Association	2.0	1.9
8010-3	Ryan Rusher	2.5	2.4
8029-3	Dakota Dunes Community Improvement District	17.8	17.3
8040-3	Heine Electric & Irrigation, Inc.	1.0	1.0
8354-3	Two Rivers, Inc.	30.0	29.1
8380-3	National Field Archery Association	7.0	6.8
8407-3	Gayville-Volin School District 63-1	4.5	4.4
5998A-3	Clay Rural Water System, Inc.	300.0	n/a ^a
Total:		737.6	424.5
a - The volume for this permit is accounted for in Table 1			

There are five future use permits appropriating water from the Missouri: Elk Point aquifer. The full permitted volume authorized from the permits is utilized when estimating the annual volume usage. The future use areas are all in Clay County and composed of 13,000 ac-ft reserved by Lewis and Clark Rural Water System and 1,900 ac-ft reserved by the City of Vermillion. This is a total of 14,900 ac-ft/yr of water reserved for these permits and will be included in the water balance section for future use.

There are numerous domestic wells on file with the Water Rights Program within the Missouri: Elk Point aquifer (Water Rights, 2021b). Domestic users are not required to report their annual water usage and due to their low diversion rates are not considered a significant portion of the hydrologic budget. Additionally, some domestic wells may no longer be in use with the development of rural water systems in the area.

There are three pending applications for the Missouri: Elk Point aquifer, Water Permit Application Nos. 8503-3, 8513-3, and 8517-3 proposing to irrigate a combined 331 acres of crops. Utilizing the average annual application rate of 0.343 feet on permitted acres (Farmer, 2021), 114 ac-ft/yr will be included in the water balance for the pending applications.

Water Balance:

The Missouri: Elk Point aquifer estimated average annual withdrawal rate is 91,544 ac-ft/yr (non-irrigation: 48,361; irrigation: 28,169; future use: 14,900; pending: 114). Estimated average annual recharge is 92,000 ac-ft/yr. The expected use of 24 ac-ft/yr (crop irrigating 70 acres at the annual 0.343 ft application rate per permitted acre) by this application does not result in an exceedance of average annual withdrawal compared to recharge for this aquifer. As mentioned earlier, there is likely more induced recharge than has been calculated. Therefore, there is reasonable probability unappropriated water is available for this application.

Observation Well Data

Administrative Rule of South Dakota (ARSD) Section 74:02:05:07 requires that the Water Management Board 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 32 observation wells completed into the Missouri: Elk Point aquifer (Water Rights, 2021c). The hydrographs for the observation wells within approximately three miles of Water Permit Application No. 8519-3 are shown in Figures 3 through 6.

The hydrographs shown in Figures 3 through 6 are representative of the hydrographs for other observation wells completed in the Missouri: Elk Point aquifer. The hydrographs show the water level of the aquifer is relatively stable over the period of record. They indicate that the aquifer responds well to climatic conditions with rising water levels during wet periods and declining water levels during drier periods. They also demonstrate that any drawdowns from pumping are temporary because the water levels typically recover to pre-pumping levels after the irrigation season.

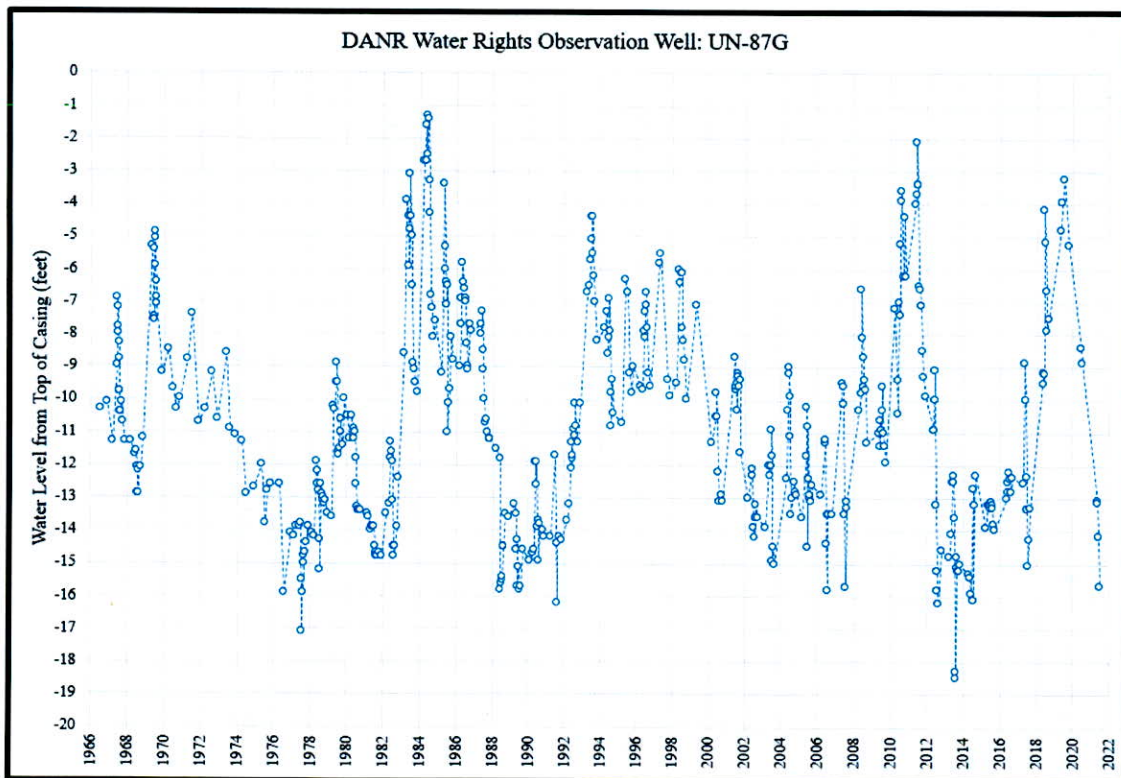


Figure 3. Hydrograph for observation well UN-87G located approximately 1.4 miles northeast of the proposed well location for Water Permit Application No. 8519-3 (Water Rights, 2021c).

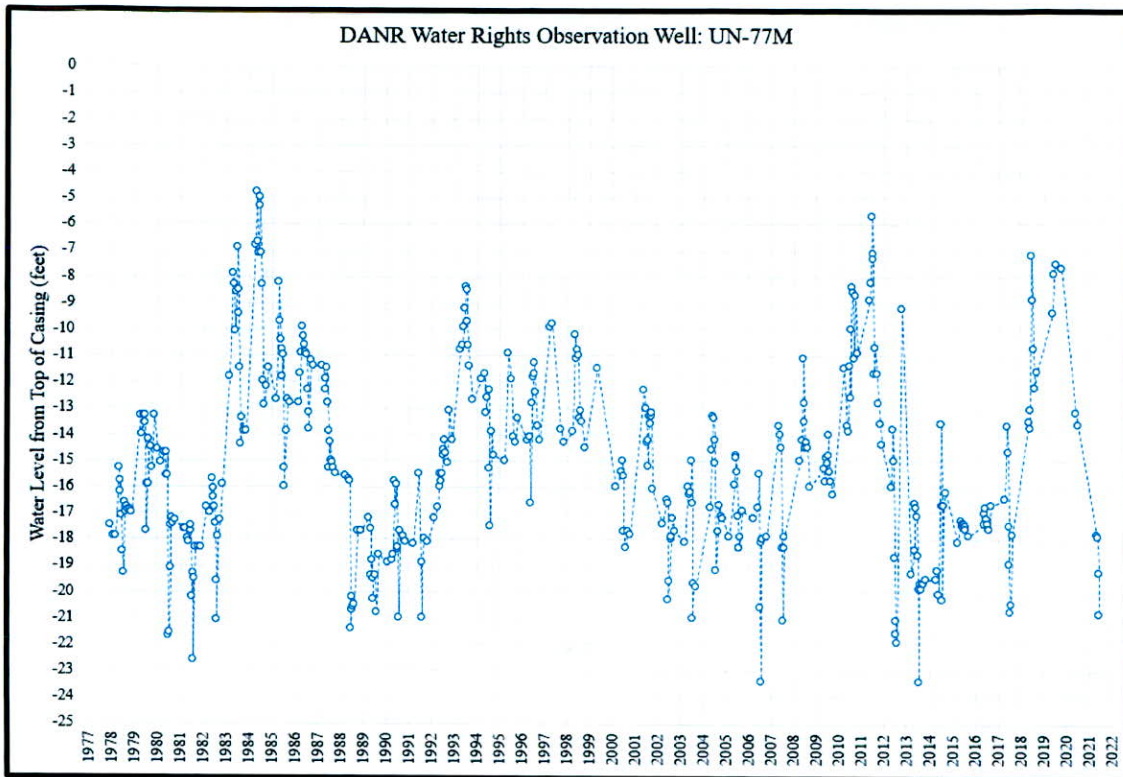


Figure 4. Hydrograph for observation well UN-77M located approximately 2.3 miles southeast of the proposed well location for Water Permit Application No. 8519-3 (Water Rights, 2021c).

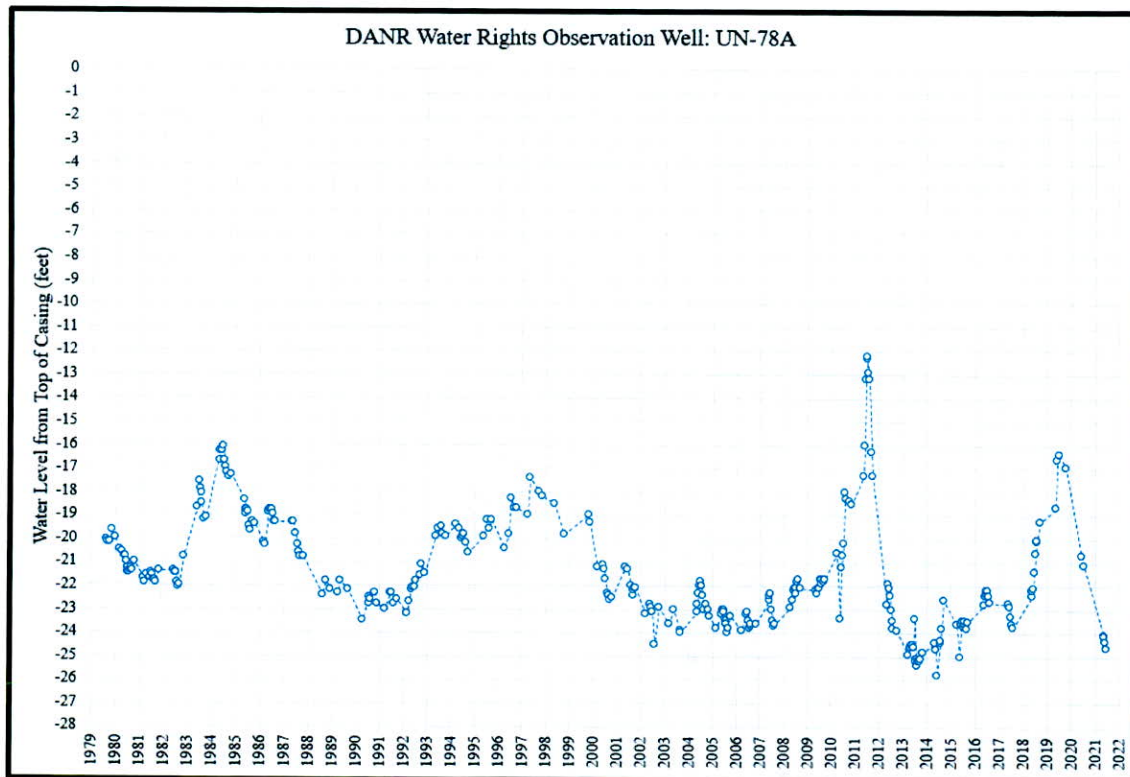


Figure 5. Hydrograph for observation well UN-78A located approximately 2.7 miles south of the proposed well location for Water Permit Application No. 8519-3 (Water Rights, 2021c).

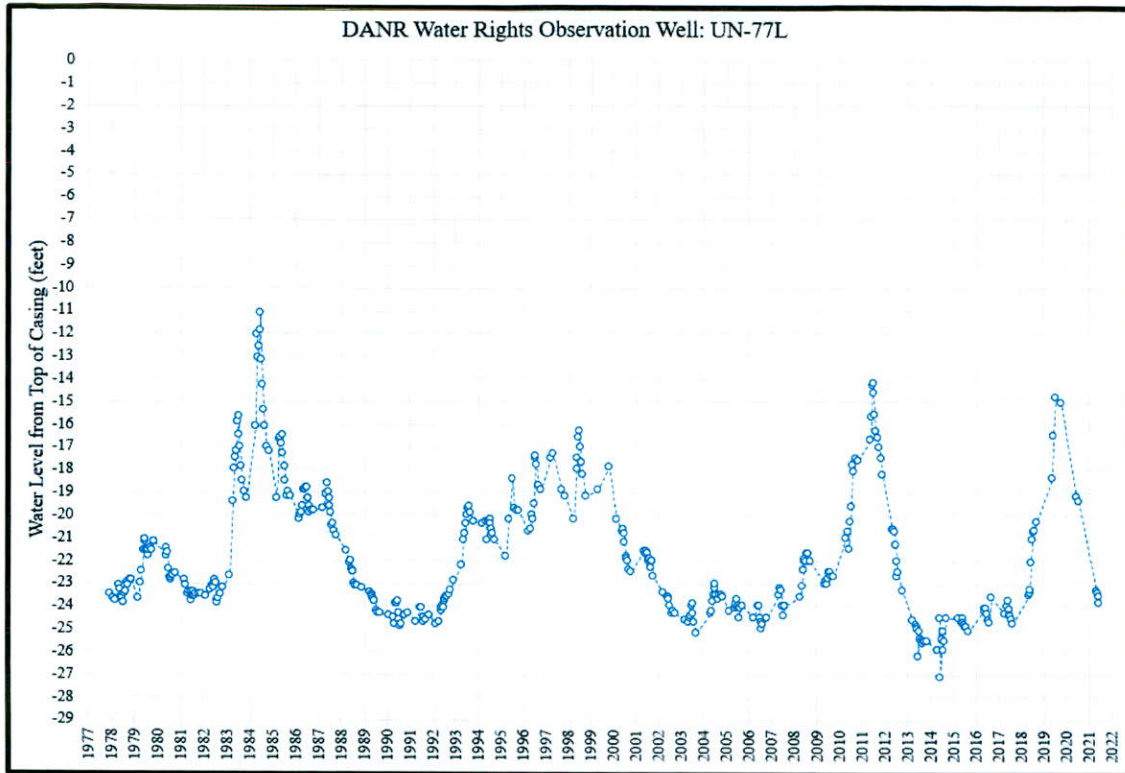


Figure 6. Hydrograph for observation well UN-77L located approximately 2.4 miles southwest of the proposed well location for Water Permit Application No. 8519-3 (Water Rights, 2021c).

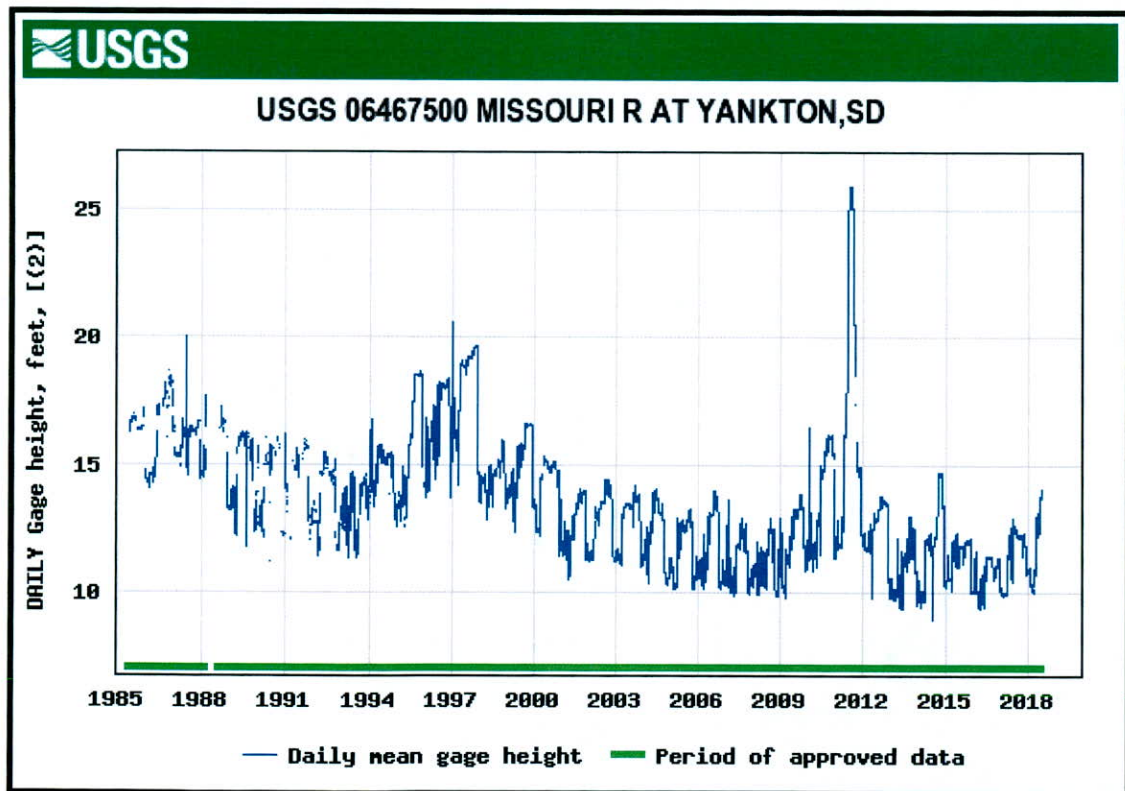


Figure 7. Hydrograph for USGS Stream Gage 06467500 Missouri River at Yankton, SD (USGS, 2021).

The U.S. Geological Survey (USGS) operates stream flow gaging station No. 06467500, on the Missouri River at Yankton, SD. Comparing the hydrograph for this gage (Figure 7) to the observation well hydrographs of the Missouri: Elk Point aquifer (Figures 3 through 6), show both the river and the aquifer react to climatic conditions by rising and falling in a similar fashion. Furthermore, during flood events, as particularly shown in 2011, the water level in the aquifer, especially closer to the Missouri River, rises very quickly beyond what is typically seen for glacial outwash aquifers. This indicates there is hydraulic connection between the aquifer and the river. This means that when the elevation of the water in the river is higher than the aquifer, the river recharges the aquifer. Conversely, when the elevation of the water is higher in the aquifer, the aquifer naturally discharges to the river. As-a-result, there is a reasonable probability unappropriated water is available for this proposed appropriation.

Several Missouri: Elk Point aquifer observation well hydrographs show a gradual downward trend. These wells are located close to the Missouri River and the downward trend is due to entrenchment of the Missouri River channel, below Gavins Point Dam in Yankton, SD, lowering the water surface elevation of the river (Goodman, 2007). This results in a lowering of water levels in the hydraulically connected aquifer as the water level in the aquifer equilibrates to the lower average water surface elevation of the river. Therefore, downward trends are likely caused by the entrenchment of the Missouri River channel and not from over-appropriation of the Missouri: Elk Point aquifer (Mathiowetz, 2020).

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS

Currently, there are a total of 629 water rights/permits appropriating or reserving water from the Missouri: Elk Point aquifer (Water Rights, 2021a). Table 3 lists the Missouri: Elk Point aquifer water rights/permits shown in Figure 8 within approximately two miles of the proposed well location for Application No. 8519-3.

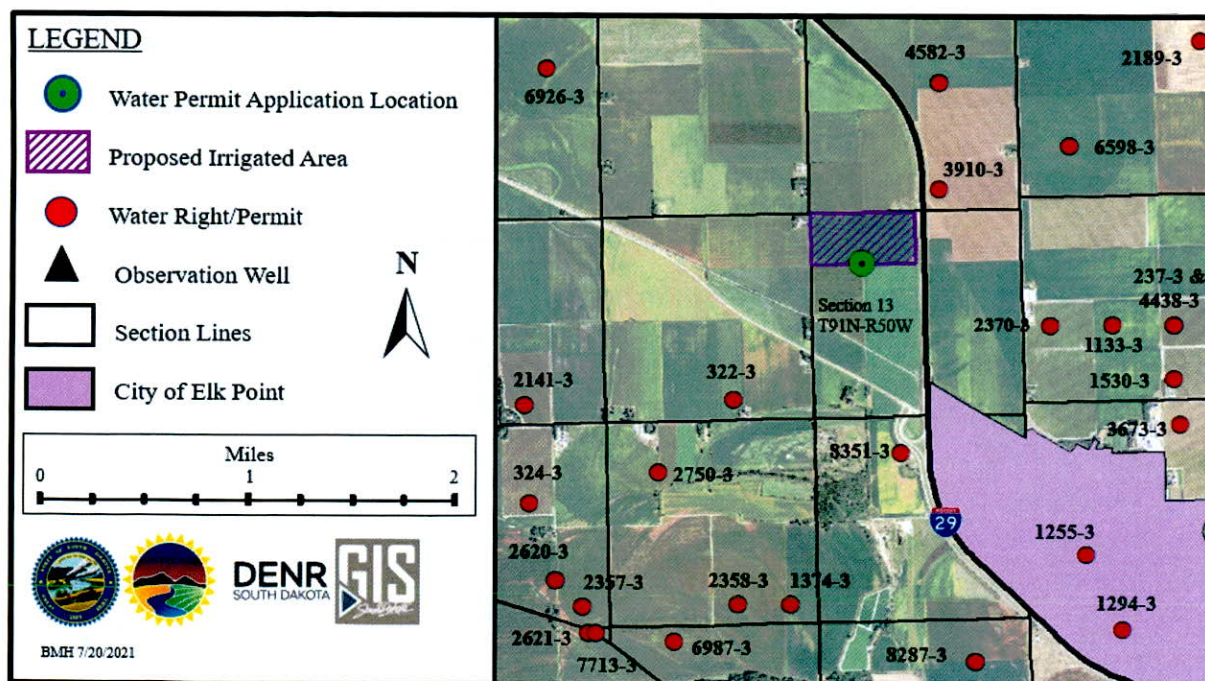


Figure 8. Existing Missouri: Elk Point aquifer water rights/permits and observation well in the vicinity of Water Permit Application No. 8519-3 (Water Rights 2021a & 2021c).

Table 3. Water rights/permits shown in Figure 6 (Water Rights, 2021a).

Permit Number	Name	Rate (cfs)	Acres	Status ^a	Use ^a
1255-3	CITY OF ELK POINT	1.13	0	LC	MUN
1133-3	JJ CURRY & SONS	1.86	130		IRR
1294-3	RECREATION DEV ASSN INC	1.34	102		
1374-3	TOM CURRY	2.66	295		
1530-3	EDMUND L CURRY	3.33	275		
2141-3	CALVIN L CHAUSSEE	2.28	160		
2189-3	WILLIAM J/DAVID CURRY	1.54	108		
2357-3	JOHN CURRY	1.94	136		
2358-3	JOHN CURRY	1.94	136		
2370-3	EDMUND & JACQUELINE CURRY	2.00	235		
237-3	JJ CURRY & SONS	2.28	160		
2620-3	MIKE CHICOINE	1.94	136		
2621-3	MIKE CHICOINE	1.94	136		
2750-3	LAWRENCE DONNELLY	1.80	128		
322-3	FRED JORGENSEN & SON	1.98	138.6		
324-3	CALVIN L CHAUSSEE	2.28	160		
3673-3	CLOVERLEAF FARMS INC	0.57	40		
3910-3	HUGH MORRIS	1.87	130		
4438-3	KENNETH JOLIN	1.41	99		
4582-3	ED MCINERNEY	1.88	132		
6598-3	CURRY SEED COMPANY	1.78	124		
6987-3	JFR-INV-LTD LLC	1.67	86		
6926-3	CHUCK DONNELLY	1.89	160	PE	
7713-3	MIKE CHICOINE	2.22	144.29		
8287-3	DAN & SCOTT HANSON	2.22	170		
8351-3	BOYD REIMNITZ	1.50	65		

a - LC: Licensed Water Right; PE: Permitted Water Right; MUN: Municipal; IRR: Irrigation

a - LC: Licensed Water Right; PE: Permitted Water Right; MUN: Municipal; IRR: Irrigation

There are numerous domestic wells on file with the Water Rights Program within the vicinity of the proposed well site (Water Rights 2021b). To protect domestic well users, 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 Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water is 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 because of impacts on artesian

head pressure by legitimate users is considered as an unlawful impairment, it conflicts with SDCL 46-1-4 (Water Rights, 1995). Consequently, some existing well owners may need to lower their pumps due to deeper water levels depending on the specific characteristics of the Missouri: Elk Point aquifer at their location; particularly since the aquifer is under confined conditions near the proposed diversion point for this application. However, many domestic wells may no longer be the primary water source since rural water systems have been introduced to the area. Additionally, there are several high capacity appropriative users in the area of this application and there is no history of well interference complaints in Yankton County involving the Missouri: Elk Point aquifer (Water Rights, 2021d). Nearby adequate wells are not expected to be adversely impacted as defined in ARSD 74:02:04:20(7).

When considering the large amount of artesian head pressure (29 feet), saturated thickness of the aquifer in this area, the hydrographs of nearby observation wells not showing detrimental impact of pumping, and the lack of well interference complaints due to pumping, there is reasonable probability that the proposed diversion can be developed without unlawfully impairing existing appropriative or domestic water 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 one cfs for every 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. However, no annual volume may be greater than three acre-feet per acre delivered to the land.” Water Permit Application No. 8519-3 proposes to divert water at a maximum instantaneous diversion rate of 1.78 cfs for the irrigation of 70 acres which is greater than the statutory limit of 1 cfs per 70 acres. This exceedance was requested due to the soil type at the location. According to the US Department of Agriculture soil survey website, the soil type present at this location is silty clay with only 3-5 percent sand content (USDA, 2021). This material type requires more water to achieve the proper infiltration of the soil for irrigation. Additionally, the proposed irrigation system is a center pivot that is only irrigating through a half circle. Which will require 800 gpm to operate regardless of the acres to be irrigated. These reasons have been accepted by the Water Management Board in past.

CONCLUSIONS:

1. Water Permit Application No. 8519-3 proposes to appropriate water, for the irrigation of 70 acres, at a maximum instantaneous diversion rate of 1.78 cubic feet per second (cfs) from the Missouri: Elk Point aquifer. The applicant intends to divert water from a single well, approximately 115 feet-deep, to be located near the center of NW $\frac{1}{4}$ with the irrigated acres located in the N $\frac{1}{2}$ NW $\frac{1}{4}$; all in Section 13, T91N-R50W. The site is located approximately one mile northwest of Elk Point, SD.
2. Based on the hydrologic budget, observation well data, and the potential to further induce recharge from the Missouri River, there is a reasonable probability unappropriated water is available for this proposed application.

3. There is a reasonable probability the diversions proposed by this application can be made without unlawfully impairing existing appropriative or domestic users with adequate wells.
4. Application No. 8519-3 has requested a diversion rate in excess of the statutory limit of one cfs per 70 acres cfs. This was due to the requirements for the irrigation of silt clay soils present at the location. Additionally, the proposed irrigation system is a center pivot that is only irrigating through a half circle which will require 800 gpm to operate regardless of the acres to be irrigated. Similar requests have been accepted by the Water Management Board in the past.



Blaise Hansen
SD DANR – Water Rights Program

Reviewed By:



Adam Mathiowetz, PE
SD DANR-Water Rights Program

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Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, August 10, 2021 11:20 AM
To: 'MelvinDonnelly@hotmail.com'
Subject: Water Permit Application No. 8519-3
Attachments: 1630.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>



AFFIDAVIT OF PUBLICATION

State of South Dakota)
:ss
County of Union)

Bruce L. Odson,

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:

Notice of Application No. 8519-3

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 19 day of August, 2021

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

\$ 26.74, 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 19 day of August, 2021

My commission expires 7-12-23

SUSAN ODSON
NOTARY PUBLIC
SOUTH DAKOTA



Notary Public

NOTICE OF APPLICATION NO. 8519-3 TO APPROPRIATE WATER

Notice is given that Melvin Donnelly, 47273 324th St, 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 Missouri:Elk Point Aquifer (approximately .115 feet deep) located near the center of the NW 1/4 Section 13 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 13; all in T91N-R50W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately one mile northwest of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8519-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <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 or supporting this application or recommenda-

tion must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 30, 2021.

The petition may be informal but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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

Publish Aug. 19, 2021
Published once at the total approximate cost of \$26.74
33-3-87

RECEIVED

AUG 23 2021

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED

AUG 23 2021

WATER RIGHTS
PROGRAM

MELVIN DONNELLY
47273 324TH ST
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
8 + 19 NOTICE OF APPLICATIO

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 19th DAY OF August, 2021
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$24.88 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: 08/19/2021

FILED ON: 08/19/2021


SUBSCRIBED AND SWORN TO BEFORE ME THIS 19th DAY OF August, 2021


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

NOTICE OF APPLICATION NO. 8519-3 to Appropriate Water

Notice is given that Melvin Donnelly, 47273 324th St, 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 Missouri:Elk Point Aquifer (approximately 115 feet deep) located near the center of the NW 1/4 Section 13 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 13; all in T91N-R50W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately one mile northwest of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8519-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief 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.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352) and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 30, 2021.

The petition may be informal but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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

Published once at the total approximate cost of \$24.88

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, August 10, 2021 11:16 AM
To: Elk Point - Leader Courier (leader1@iw.net)
Subject: 8519-3, Melvin Donnelly
Attachments: 8519-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on August 19, 2021.

Melvin Donnelly, 47273 324th St, Elk Point SD 57025 (712 389-0090) 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, August 10, 2021 11:17 AM
To: Jackie Lammers (jackie.lammers@yankton.net)
Subject: 8519-3, Melvin Donnelly
Attachments: 8519-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on August 19, 2021.

Melvin Donnelly, 47273 324th St, Elk Point SD 57025 (712 389-0090) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

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





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

August 10, 2021

Melvin Donnelly
47273 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

Water Permit Application No. 8519-3 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 publishers have been instructed to publish your notice. The newspapers have also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish the Notice on August 19, 2021. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 8519-3 to Appropriate Water

Notice is given that Melvin Donnelly, 47273 324th St, 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 Missouri:Elk Point Aquifer (approximately 115 feet deep) located near the center of the NW 1/4 Section 13 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 13; all in T91N-R50W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately one mile northwest of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8519-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <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 or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 30, 2021.

The petition may be informal but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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

Published once at the total approximate cost of_



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 08 2021

Melvin Donnelly
47273 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

Enclosed is Water Permit No. 8519-3 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

8519-3

SD EForm - 1621LD V1

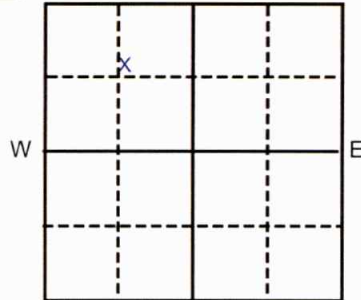
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 13 Twp 91N Rg 50WCounty UNION ☐

North

Please mark well location with an "X"



Well Completion Date

7/6/2021

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
1900 ft. from SEPTIC SYSTEM (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

REVERSE ROTARY

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>16</u> IN	<u>0</u> FT	<u>91</u> FT	<u>22</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>GROUT WEL</u>	<u>8</u>	<u>9.4</u> Lb/gal	<u>0</u> Ft	<u>26</u> Ft
<u>ARMOURCO SIDE</u>	<u>DUMP</u>	Lb/gal	<u>26</u> Ft	<u>126</u> Ft

Describe grouting procedure

TREMMIE

SCREEN:

☐ Perforated pipe ☒ ManufacturedDiameter 16 Inches Length 35 FeetMaterial SDR26Slot Size .060 Set From 91 Feet to 126 Feet

Other information

WAS A PACKER OR SEAL USED? ☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? HTH TABLETS☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: MELVIN DONNELLY

Business Name:

Address: 47273 324TH STCity, State, Zip: ELKPOINT ☐ SD ☐ 57025

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	3
BROWN CLAY	3	18
FINE GREY SAND	18	75
COARSE GRAVEL/ROCKS	75	87
FINE GREY SAND	87	89
COARSE GRAVEL/SM BOULDERS	89	126
ROCKS	126	

STATIC WATER LEVEL 24 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

42*42'11.26"-96*42'10.04"This well was drilled under license # 810 and this report is true and accurate.Drilling firm: HEINE ELECTRIC AND IRRIGATION

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 9/20/2021

RECEIVED

SEP 27 2021

WATER RIGHTS PROGRAM