

WATER PERMIT NO. 8493-3

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: **130**

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

Water to be used for: **irrigation**

County: **Union**

Type of Waste Disposal System:

Location: **5 miles west of Elk Point**

PRIORITY

Date Received: **2-22-21**

Application/License Fee: **\$ 1050**

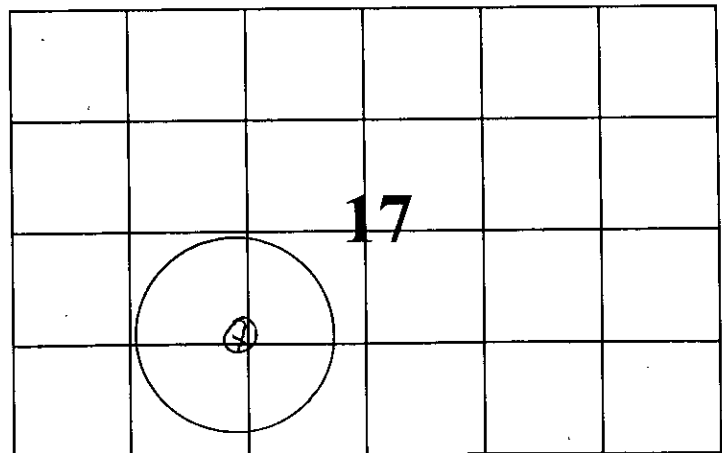
Corrected Application Received:

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

Remarks:

Diversion Point: **approximate center of the SW
1/4 Sec 17-T91N-R50W**

Land to be Irrigated: **SW 1/4 Sec 17-T91N-R50W**



Depth of Well: **115 feet deep**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **2-22-21**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8493-3**

Date of first receipt of application February 22, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8493-3 to Melvin Donnelly, PO Box 966, 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. 8493-3 appropriates 1.78 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (approximately 115 feet deep) located in the approximate center of the SW 1/4 Section 17 for irrigation of 130 acres located in the SW 1/4 Section 17; all in T91N-R50W. This site is located approximately 5 miles west 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 February 22, 2021.
4. The date of approval of Permit No. 8493-3 is May 3, 2021.
5. One-fifth of the construction is to be completed on or before November 3, 2023.
6. All construction is to be completed on or before May 3, 2026.
7. Water is to be put to beneficial use on or before May 3, 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. 8493-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals 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. 8493-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

MAY 12 2021
date



PAID

FEB 22 2021

Ck# 7597

RECEIVED

FEB 22 2021

WATER RIGHTS
PROGRAM

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8493-3</u>	(office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Vermillion R.</u>	
	Newspaper <u>Leader-Courier, Elk Point</u>	
	<u>Press & Dakotan, Yankton</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 Street Box 966 Elk Point ☒ SD ☒ 57025
(Address) (City) (State) (Zip Code)

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

2. Amount of water claimed 1.78 *CFS or 800 **GPM _____ ***AF Total Acreage 130
(*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 Aquifer

4. Location of point of diversion 1 well in NE of SW 1/4 of Section 17, T91n R50w (approximate center)
(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
Nw of Sw, Sect 17, T91n R50w	35		
Ne of Sw, Sect 17, T91n R50w	35		
sw of Sw, Sect 17, T91n R50w	30		
se of Sw, Sect 17, T91n R50w	30		

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, 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) 115 Depth to Top of Water Bearing Material 50 Depth to Water from Surface 20

d) 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)

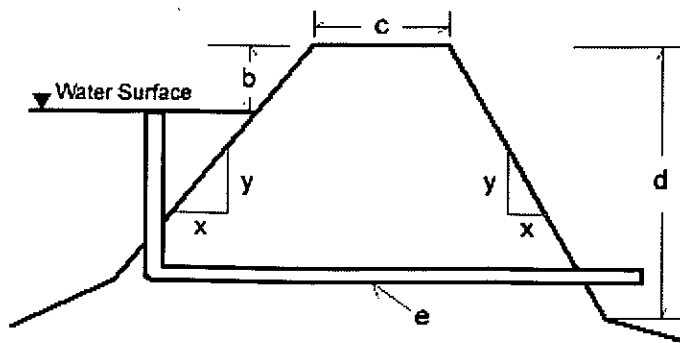
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



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) Freboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

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

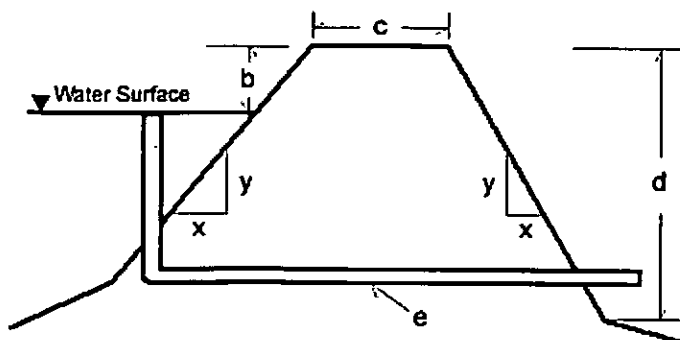
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres

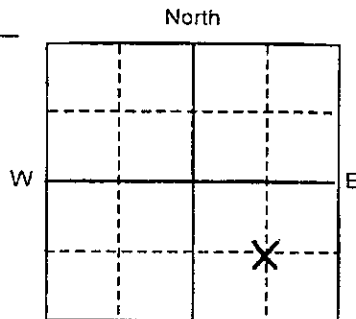


SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location contd 1/4 SE 1/4 Sec 17 Twp 91N Rg 50WCounty Union

Please mark well location with an "X"



Well Completion Date

11-6-15

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other
 If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>sch 40</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>85</u> FT	<u>28</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>	_____	Lb/gal	_____ Ft	_____ Ft
		Lb/gal	_____ Ft	_____ Ft

Describe grouting procedure

Pressure Grouted

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 16 Inches Length _____ Feet

 Material PVC
 Slot Size .040" Set From 85 Feet to 115 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 Tabs
☐ No, Why Not?
 Lab to which water quality sample sent for analysis _____

Well Owner:

Melvin Donnelly

Business Name:

Address:

PO Box 966

City, State, Zip:

Elk Point, S.D. 57025

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Gumbo Clay</u>	<u>0</u>	<u>8</u>
<u>Sand w/ clay layers</u>	<u>8</u>	<u>50</u>
<u>Sand + gravel</u>	<u>50</u>	<u>90</u>
<u>coal layer</u>	<u>90</u>	<u>93</u>
<u>Sand + Gravel</u>	<u>93</u>	<u>98</u>
<u>coal layer</u>	<u>98</u>	<u>100</u>
<u>Sand + Gravel</u>	<u>100</u>	<u>115</u>

STATIC WATER LEVEL

16

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

34 Ft. After 1 Hrs. pumped 1000 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: 800 GPM

REMARKS

Permit # 8079-3Missouri: Elk PointThis well was drilled under license # 963

and this

report is true and accurate.

Drilling firm:

Salmon Well Co.

Signature of License Representative:

Scott Salmon

Signature of Well Owner or Equitable Property Holder:

Melvin Donnelly

Date:

11-17-15

RECEIVED

DEC - 7 2015

WATER RIGHTS
PROGRAM

Hanson/Donnelly Irrigation

Sect 17, T91n R50w
Union County SD

well

x Scott Hanson/Donnelly 2021

Google Earth

SW Corner, 91N, 50W, Section 17

26

324th St



1000 ft



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8493-3, 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. 8493-3, Melvin Donnelly, 47273 324th St, Elk Point SD 57025.

The Chief Engineer is recommending APPROVAL of Application No. 8493-3 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. 8493-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals 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. 8493-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund, Chief Engineer
April 15, 2021

REPORT TO THE CHIEF ENGINEER
WATER PERMIT APPLICATION NO. 8493-3
MELVIN DONNELLY
APRIL 15, 2021

Water Permit Application No. 8493-3 proposes to appropriate water 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, approximately 115 feet-deep, well to be located near the center of the SW ¼ Section 17 for irrigation of 130 acres located in the SW ¼ Section 17; all in T91N-R50W. The site is located approximately 5.0 miles west of Elk Point, SD.

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). Both confined and unconfined groundwater conditions are present in the aquifer (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). Existing water well completion reports in the vicinity of the proposed application show an average of 19.4 feet of silty, sandy clay alluvium overlying water bearing sand with gravel with an average depth to the groundwater surface of 14.5 feet. (Water Rights, 2021a). Typically, alluvium is considered a portion of the aquifer and not a confining layer. Therefore, the Missouri: Elk Point is unconfined in the location of the proposed application.

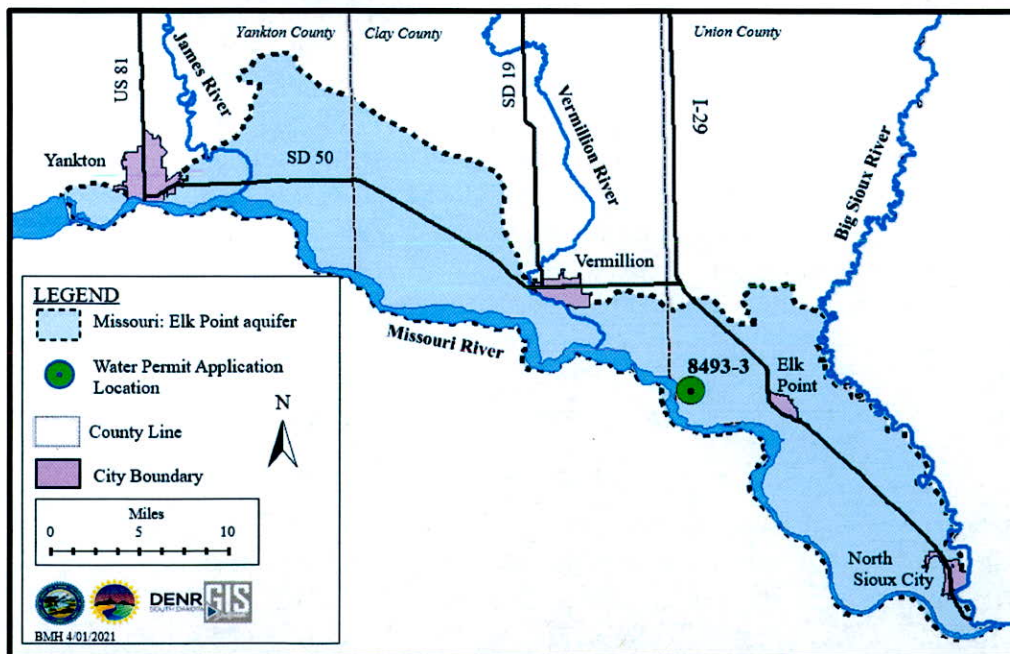


Figure 1. Water Permit Application No. 8493-3 shown within the Missouri: Elk Point aquifer boundary (modified from: Hedges et al., 1982).

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. 8493-3 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 Dakota 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 currently and 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 with the recognition that as Lewis & Clark RWS further develops, they will likely induce more recharge. There are other wells, both domestic and appropriative, in close vicinity of 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 near land surface, well withdrawals, leakage to the underlying Dakota aquifer and outflow to the Missouri and Big Sioux Rivers (Bugliosi, 1983; Niehus, 1994). Currently, there are a total of 621 water rights/permits (39 non-irrigation, 577 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.

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

Use ^a	Number of Water Rights/Permits	Appropriation limited by Annual Volume (ac-ft/yr)	Appropriation limited by Diversion Rate (cfs)	Total Estimated Volume (ac-ft/yr)
COM	12	227.0	1.540	895.98
DOM	2		2.780	1,207.63
FWP	4		7.650	3,323.16
IND	5		0.878	381.40
MUN	11	10,686.0	8.330	14,304.55
REC	1	393.3		393.30
RWS	2	32,165.0		32,165.00
SHD	2		0.199	86.45
Total	39	43,471.3	21.377	52,757.47
a - COM: Commercial; DOM: Domestic; FWP: Fish and Wildlife Propagation; IND: Industrial; MUN: Municipal; REC: Recreational; RWS: Rural Water System; SHD: Suburban Housing Development				

The total estimated volume of 52,757 ac-ft/yr can be modified after consideration of the thirteen non-irrigation permits that are required to report their annual usage from the Missouri: Elk Point aquifer. The estimated annual volume for nine of these permits are accounted for in Table 1. Five commercial use permits (8031-3, 8381-3, 8403-3, 8415-3, and 8435-3) are currently under development and are authorized a combined (2.69 cfs) 1,169 ac-ft/yr, assuming a 60 percent pumping rate. Permit No. 8147-3, 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 permits 6736-3 (20,165 ac-ft/yr) and 7207-3 (12,000 ac-ft/yr). Even though the average reported pumping rate is 12,678 ac-ft/yr, 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 No. 5998A-3 which is also required to report its total annual use and does so as a non-irrigation permit due to its irrigation system uniqueness, serving several homes in a housing development (Water Rights, 2021a). The annual appropriation for this permit is accounted for with the turf permits in Table 4.

Table 2 contains the non-irrigation permits required to report annual pumpage and the applicable adjustment to the total estimated volume. Permit No. 7388-3 (2.0 cfs) is a domestic use permit held by the Clay RWS authorized to withdraw an estimated total of 869 ac-ft/yr, assuming a 60 percent pumping rate. However, an average value of 314 ac-ft/yr, reported pumping between 2012-2019, is considered most reflective of the infrastructure currently in place. Therefore, the difference of 555 ac-ft/yr will adjust the total estimated volume for domestic use. The City of Vermillion has 2 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, with an average value of 1,192 ac-ft/yr reported from 2006-2019, the difference 1,125 ac-ft/yr will adjust the total estimated volume for municipal permits. An adjusted total estimated volume of 51,081 ac-ft/yr will be included in the water balance for non-irrigation permits.

Table 2. Adjustment to Total Estimated Volume based on Non-irrigation pumpage reports for the Missouri: Elk Point aquifer (Water Rights, 1979-2019a, 2021a).

Use ^a	Non-Irrigation required to report annual usage	Permit Nos.	Reported Annual Estimated Volume (ac-ft/yr)	Change to Table 1	Total Estimated Volume (ac-ft/yr)
COM	currently under development	8031-3, 8381-3, 8403-3, 8415-3, 8435-3	1,169	none	895.98
	Doug Lafleur	8147-3	160		
DOM	Clay RWS ^b	7388-3	314	555	652.63
FWP	N/A				3,323.16
IND					381.40
MUN	City of Vermillion	147-3, 6236-3	1,192	1,125	13,182.72
	City of Yankton	8212-3	6050	none	
REC	N/A				393.30
RWS	Lewis & Clark RWS	6736-3, 7207-3	32,165	none	32,165.00
SHD	N/A				86.50
Total					51,080.69
a - COM: Commercial; DOM: Domestic; FWP: Fish and Wildlife Propagation; IND: Industrial; MUN: Municipal; REC: Recreational; RWS: Rural Water System; SHD: Suburban Housing Development					
b – Clay RWS maintains Permit No. 5998A-3 which is also required to report annual use as a non-irrigation permit. The annual appropriation for this permit is accounted for with the turf permits in Table 4.					
N/A – Not Applicable, Non-irrigation Water Permits with a Use designation that are not required to submit an annual pumpage report.					

Well withdrawals from the Missouri: Elk Point aquifer are primarily for irrigation use. Table 3 shows the historic irrigation water use from the aquifer as reported to the DENR-Water Rights Program through annual irrigation questionnaires. The average annual reported pumping is 18,857.75 ac-ft/yr (Water Rights, 1979-2019b). However, this is not reflective of the increased pumpage from recent development. Stonesifer (2013) and Farmer (2018a) developed a method to estimate the average annual use from irrigation that accounts for an increasing issuance of water rights/permits and applies the correct allowance for appropriation per permitted acre when it was reduced, in 1978, from 3 ac-ft to 2 ac-ft. Farmer (2018a) determined that an average application rate of 0.35 feet per permitted acre (ft/ac) can be utilized to estimate annual use for irrigation.

Table 3. Historic irrigation pumpage from the Missouri: Elk Point aquifer (Water Rights, 1979-2019b).

Year	Number of Permits Reporting	Appropriation (acre-feet/year)	Pumpage (acre-feet/year)
1979	265	124,828.0	10,377.00
1980	267	126,362.0	15,205.00
1981	302	136,318.0	14,233.00
1982	272	123,559.3	18,822.35
1983	274	121,895.7	10,834.04
1984	283	126,743.4	9,194.30
1985	284	125,068.5	13,983.50
1986	288	125,842.5	6,451.60
1987	282	124,104.3	13,439.70
1988	283	124,014.1	28,756.35
1989	294	126,847.3	25,941.90
1990	297	127,965.7	19,425.00
1991	300	126,471.7	18,798.60
1992	295	125,265.7	1,881.95
1993	298	125,576.3	1,475.20
1994	295	122,975.1	10,221.43
1995	292	121,644.3	18,320.24
1996	296	124,606.2	9,412.78
1997	305	126,518.2	17,182.00
1998	313	127,862.6	11,127.24
1999	308	125,225.6	14,748.02
2000	309	124,852.2	26,640.12
2001	313	125,537.4	19,071.88
2002	315	125,555.8	23,547.22
2003	314	125,379.8	26,734.67
2004	322	126,955.8	23,862.25
2005	335	130,046.6	23,964.50
2006	353	136,491.6	27,974.54
2007	366	139,826.6	30,482.84
2008	445	161,640.0	56,538.19
2009	410	155,245.4	6,120.97
2010	419	155,905.4	2,723.87
2011	431	159,700.8	12,107.55
2012	445	161,640.0	56,538.19
2013	543	185,637.7	34,838.46
2014	557	189,492.7	12,084.23
2015	563	191,387.7	17,751.93
2016	564	190,428.8	27,638.64
2017	567	191,366.2	37,013.46
2018	570	191,113.7	8,855.66
2019	575	191,797.2	8,847.29
Maximum:	575	191,797.2	56,528.19
Minimum:	265	121,644.3	1,475.20
Average:	361.2	141,456.0	18,857.75

Currently, there are 577 water rights/permits for irrigation with 75,520.5 total permitted acres for irrigation (Water Rights, 2021a). Farmer (2018b) further refined estimating average annual use by considering the different application rates between turf and crop irrigation. Turf irrigation should be determined separately because they tend to utilize their full authorized allowance for appropriation. Table 4 shows the permits that are considered turf irrigation with the appropriation amount determined from the permitted acres, multiplied by either 2 or 3 ac-ft as specifically allowed for each permit. A value of 1,877.7 ac-ft/yr will be included in the total volume estimate for turf irrigation. Subsequently, the calculation for estimated annual use requires adjustment because the acres for turf irrigation need to be removed from the total permitted acres. Subtracting the turf irrigation acres (Table 4) from the total permitted acres yields a value of 74,782.9 acres for crop irrigation. Applying the 0.35 ft/ac application rate to the acres for crop irrigation yields approximately 26,174 ac-ft/yr. Summing turf and crop irrigation estimates yields a value of 28,051 ac-ft/yr to be included in the water balance section for irrigation permits.

Table 4. Water rights/permits for irrigation on turf (Water Rights, 2021a).

Permit Number	Name	Acres	Appropriation (ac-ft)
1294-3	Recreation Development Association, Inc.	102.0	306.0
2011-3	Two Rivers Golf Club	95.0	285.0
5786-3	Dakota Dunes Golf Course	173.0	519.0
5935-3	Ted Waitt	1.0	2.0
5936-3	Applied Engineering, Inc.	1.8	3.6
5998A-3	Clay Rural Water System, Inc.	300.0	600.0
7225-3	National Field Archery Association	2.0	4.0
8010-3	Ryan Rusher	2.5	7.5
8029-3	Dakota Dunes Community Improvement District	17.8	35.6
8040-3	Heine Electric & Irrigation, Inc.	1.0	2.0
8354-3	Two Rivers, Inc.	30.0	90.0
8380-3	National Field Archery Association	7.0	14.0
8407-3	Gayville-Volin School District 63-1	4.5	9.0
Total:		737.6	1,877.7

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 their low diversion rates are not considered a significant portion of the hydrologic budget. Additionally, some domestic well may no longer be in use after the development of rural water systems in the area.

There are five pending applications for the Missouri: Elk Point aquifer, Water Permit Application Nos. 8463-3, 8474-3, 8475-3, 8476-3, and 8489-3, proposing to irrigate of 528.2 acres. Utilizing

the average application rate of 0.35 feet per permitted acre (Farmer, 2018a), approximately 185 ac-ft/yr will be included in the water balance for the pending application.

Water Balance:

The Missouri: Elk Point aquifer estimated average annual withdrawal rate is 94,217 ac-ft/yr (non-irrigation: 51,081; irrigation: 28,051; future use: 14,900; pending: 185). Estimated average annual recharge is 92,000 ac-ft/yr. The expected use of 46 ac-ft/yr (irrigating 130 acres at the 0.35 in/ac application rate) by this application results in an exceedance of 2,263 ac-ft/yr in average annual withdrawal compared to recharge for this aquifer. However, the amount of induced recharge is likely much greater than currently estimated because the amount of recharge induced by non-Lewis & Clark RWS wells has not been estimated (Mathiowetz, 2020). Moreover, the wells for the Lewis and Clark RWS induce at least 50% of their recharge from the Missouri River and any additional induced recharge by other users has not been estimated. Therefore, there is a reasonable probability additional induced recharge potential exists in this aquifer to meet the estimated exceedance shown in the hydrologic budget plus the withdrawal proposed by this application.

Observation Well Data

Administrative Rule of South Dakota 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 DENR-Water Rights Program monitors 33 observation wells completed into the Missouri: Elk Point aquifer (Water Rights, 2021c). The hydrographs for the observation wells within approximately six miles of Water Permit Application No. 8493-3 are shown in Figures 2 through 5.

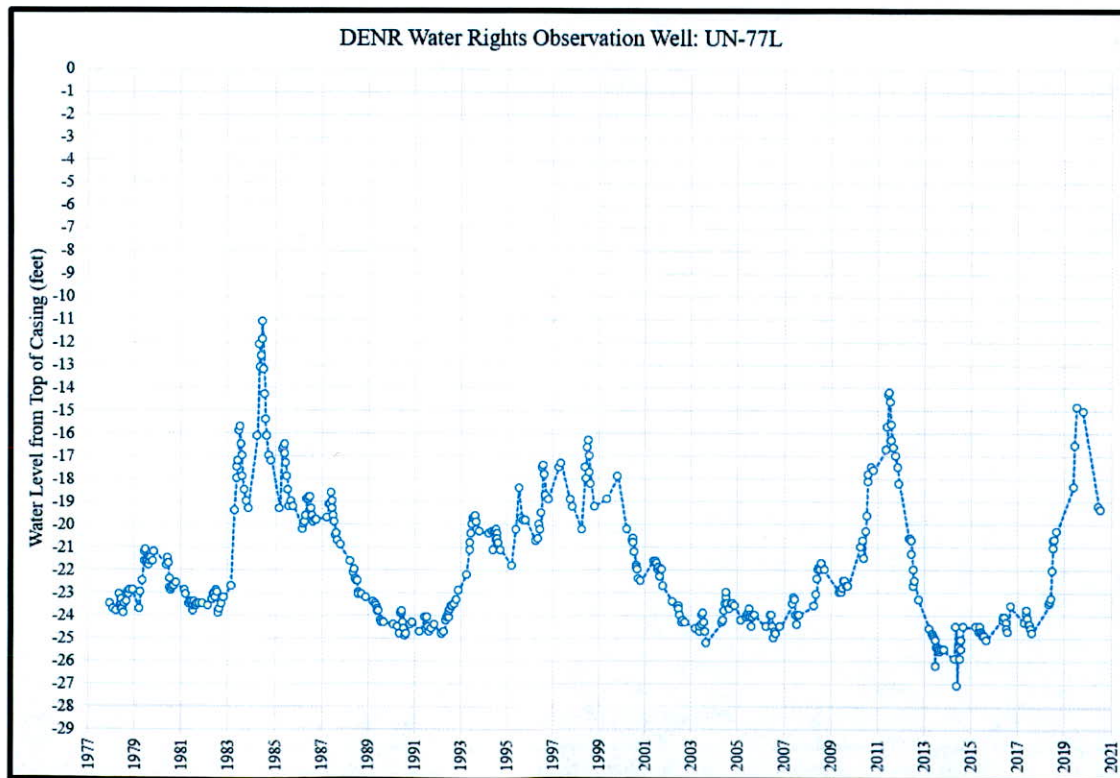


Figure 2. Hydrograph for observation well UN-77L located approximately 1.8 miles east of the proposed well location for Water Permit Application No. 8493-3 (Water Rights, 2021c).

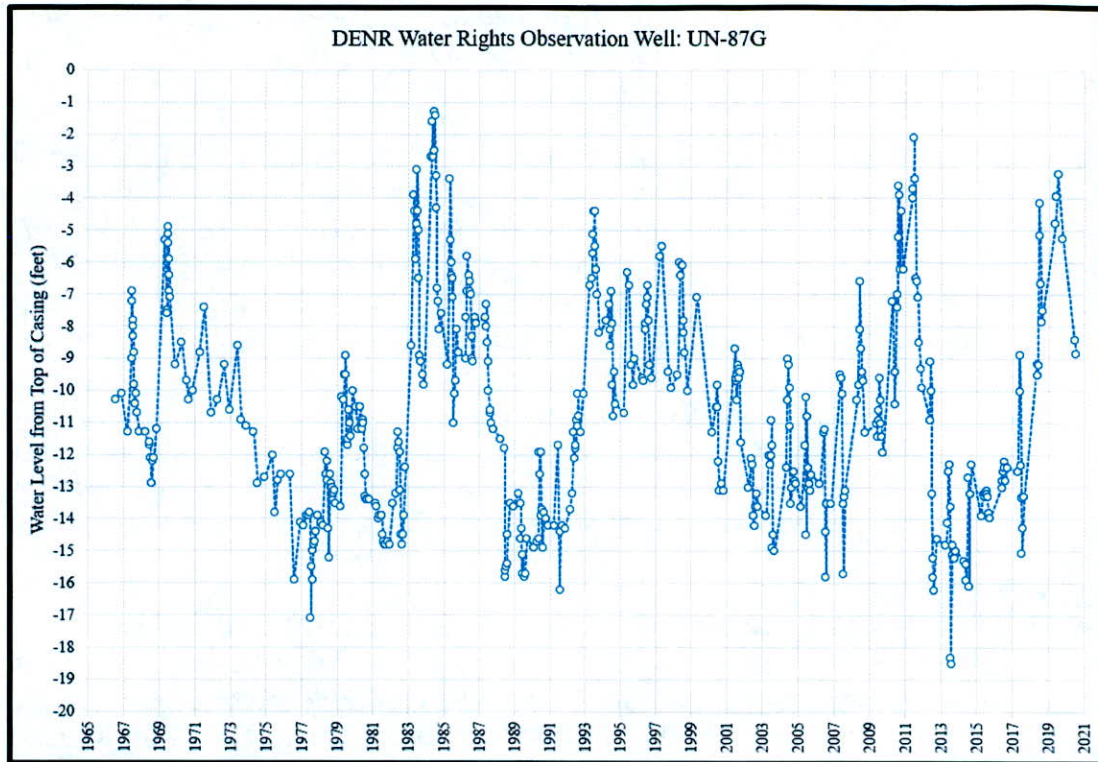


Figure 3. Hydrograph for observation well UN-87G located approximately 5.1 miles northeast of the proposed well location for Water Permit Application No. 8493-3 (Water Rights, 2021c).

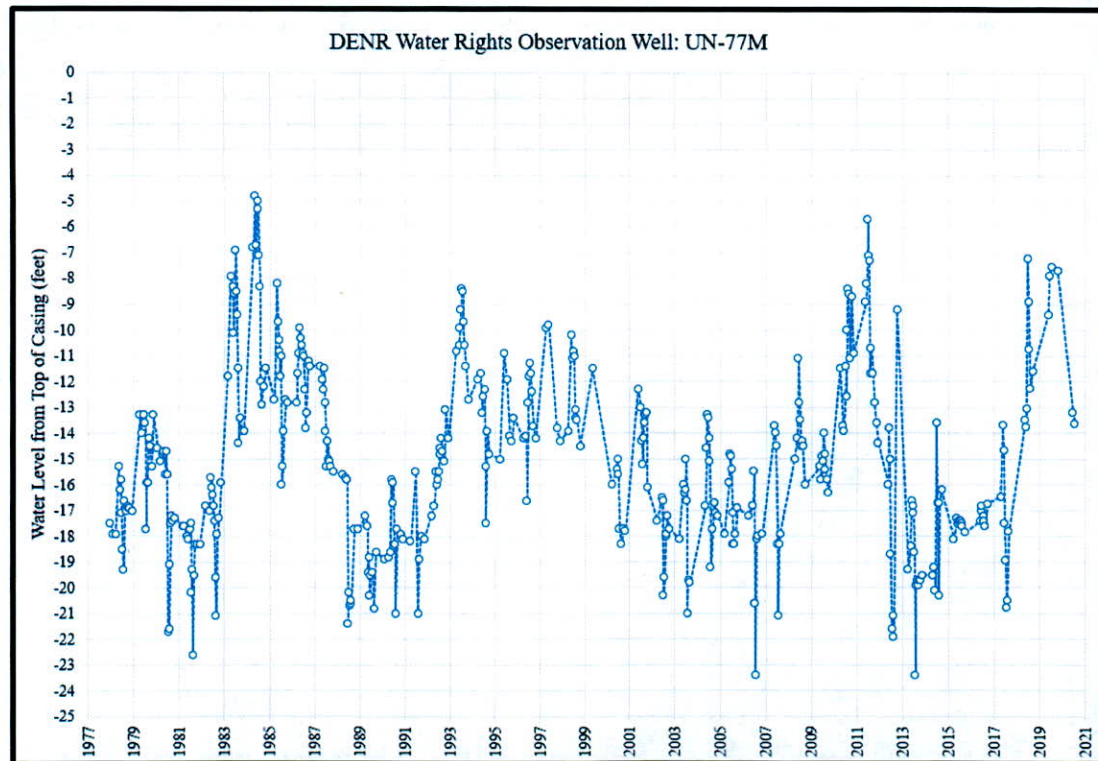


Figure 4. Hydrograph for observation well UN-77M located approximately 6.2 miles east of the proposed well location for Water Permit Application No. 8493-3 (Water Rights, 2021c).

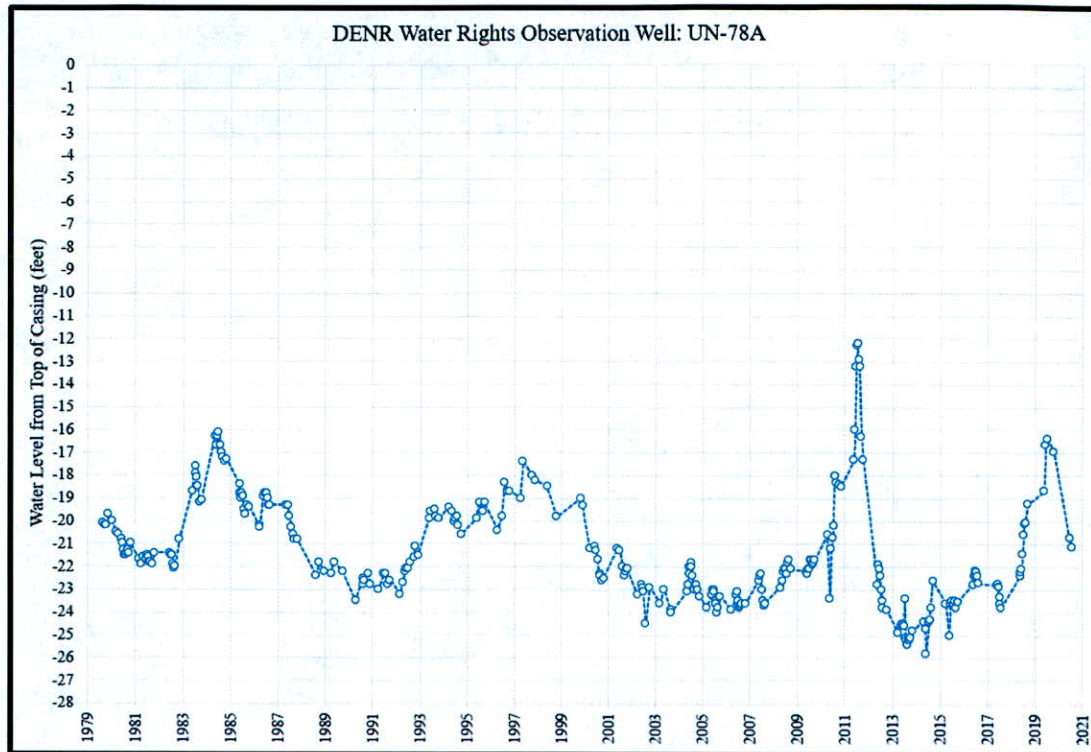


Figure 5. Hydrograph for observation well UN-78A located approximately 5.2 miles southeast of the proposed well location for Water Permit Application No. 8493-3 (Water Rights, 2021c).

The hydrographs shown in Figures 2 through 5 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.

A few Missouri: Elk Point aquifer observation well hydrographs show a gradual downward trend. These wells are located next to the Missouri River and the downward trend is due to entrenchment of the Missouri River, 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 and not from over-appropriation of the Missouri: Elk Point aquifer (Mathiowetz, 2020).

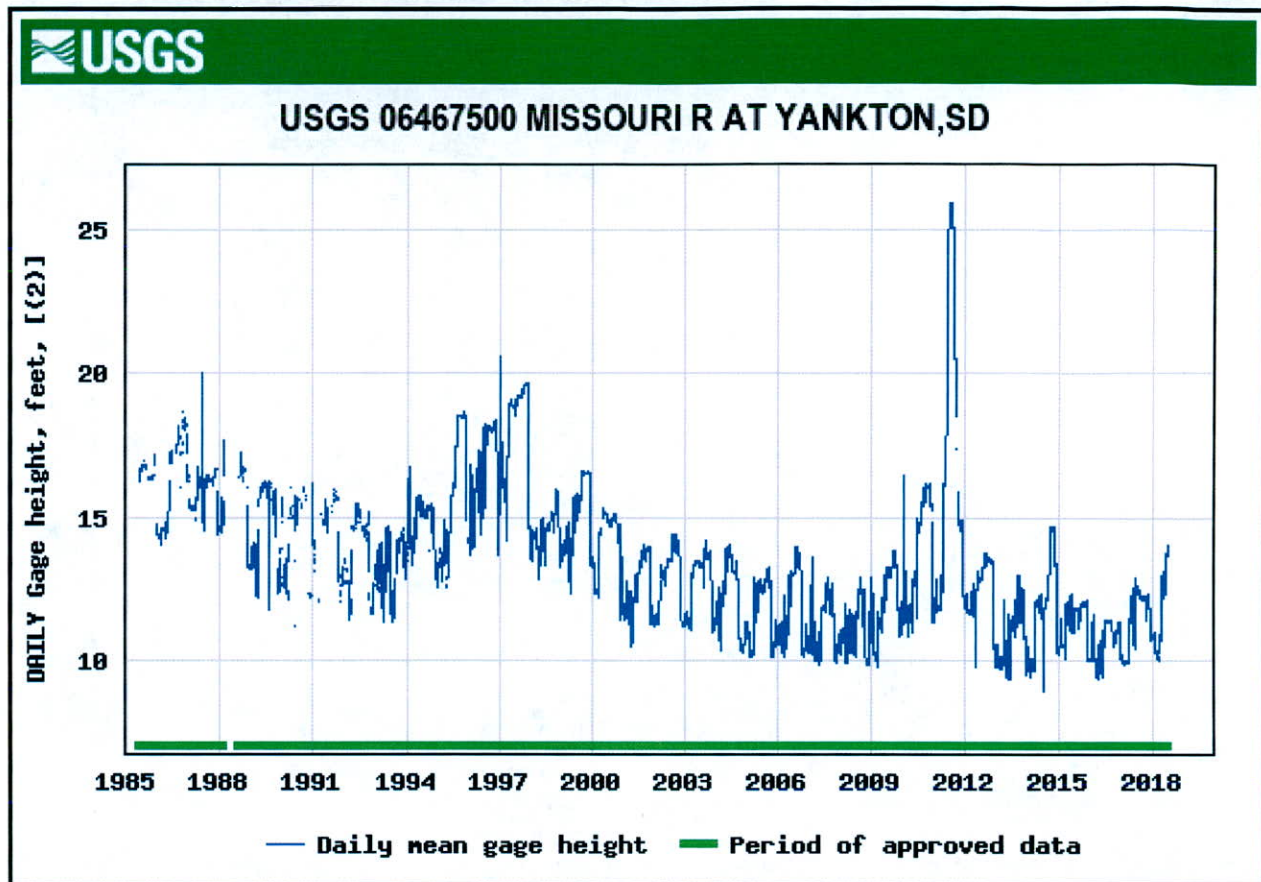


Figure 6. Hydrograph for USGS Stream Gage 06467500 Missouri River at Yankton, SD (USGS, 2021).

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 6) to the observation well hydrographs of the Missouri: Elk Point aquifer (Figures 2 - 5), 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 greater 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, as long as there is water in the river, there will be water in the aquifer and there is a reasonable probability unappropriated water is available for this proposed appropriation.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS

Currently, there are a total of 621 water rights/permits appropriating or reserving water from the Missouri: Elk Point aquifer (Water Rights, 2021a). Table 5 lists the water rights/permits shown in Figure 7 within 3 miles of the proposed well locations for Application No. 8493-3.

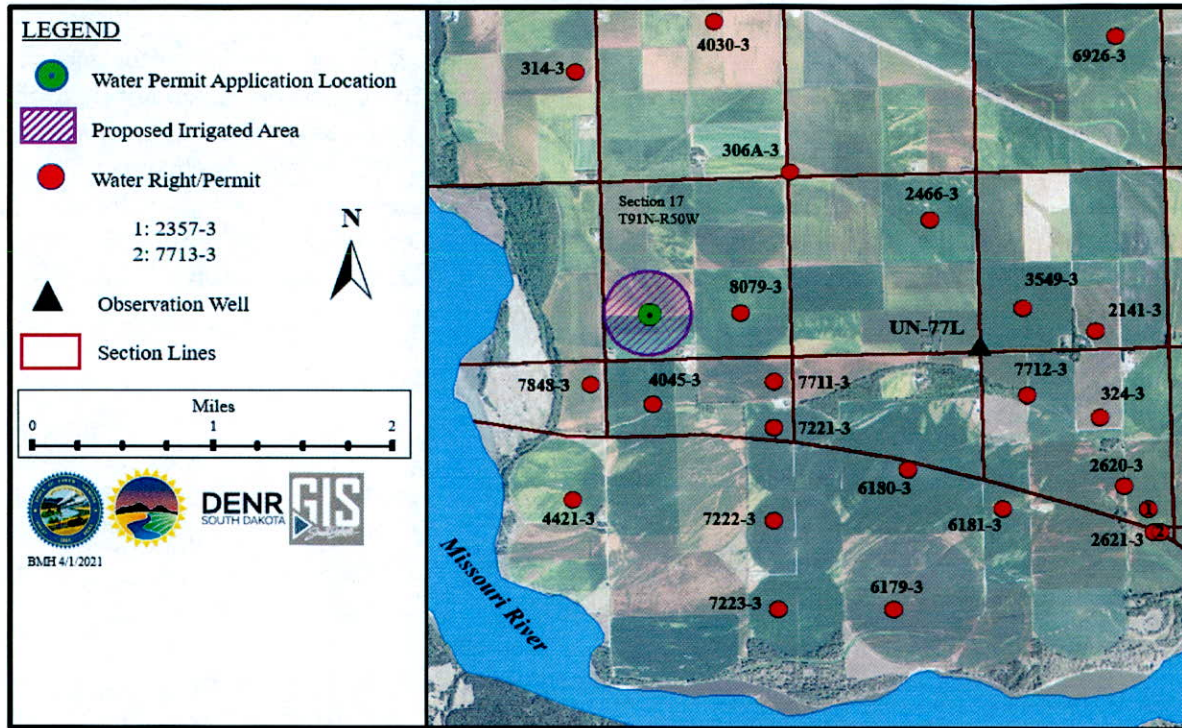


Figure 7. Existing Missouri: Elk Point aquifer water rights/permits and observation well in the vicinity of Water Permit Application No. 8493-3 (modified from Hedges, et al., 1982; Water Rights 2021a & 2021c).

Table 5. Water rights/permits shown in Figure 7 (Water Rights, 2021a).

Permit Number	Name	Use ^a	Status ^a	Rate (cfs)	Acres
306A-3	THOMAS W CURRY	IRR	LC	1.71	120
314-3	JAMES DONNELLY			2.67	280
324-3	CALVIN L CHAUSSEE			2.28	160
4045-3	NORMA JEAN DAVIS			9.61	673
2141-3	CALVIN L CHAUSSEE			2.28	160
2357-3	JOHN CURRY			1.94	136
2466-3	CAROLA DONNELLY			3.88	272
2620-3	MIKE CHICOINE			1.94	136
2621-3	MIKE CHICOINE			1.94	136
3549-3	MARCELLA FLANNERY ESTATE			1.89	132
4032-3	DAWN & GARY GLOVER			0.57	40
4421-3	MISSOURI VALLEY FARMS INC			3.41	239
6179-3	TIMBER8 LLC			4.29	300
6180-3	TIMBER8 LLC			4.44	326
6181-3	TIMBER8 LLC			2.00	142
8079-3	MELVIN DONNELLY			1.78	135
6926-3	CHUCK DONNELLY		PE	1.89	160
7221-3	MIKE CHICOINE			2.01	141
7222-3	MIKE CHICOINE			2.01	141
7223-3	MIKE CHICOINE			2.01	141
7711-3	MIKE CHICOINE			1.67	115
7712-3	JAMES CHICOINE			1.78	75
7713-3	MIKE CHICOINE			2.22	144
7848-3	MISSOURI VALLEY FARMS INC			3.04	213

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

There are numerous domestic wells on file with the Water Rights Program within the vicinity of the proposed well site (Water Rights 2021b). Users in the vicinity of the proposed application are likely using water provided by a rural water system. Nevertheless, when considering that drawdown from pumping in an unconfined aquifer does not extend far beyond the pumping well, domestic users with adequate wells are not anticipated to be adversely impacted by the pumping proposed for this application. Even though there are many high capacity wells in the Missouri: Elk Point aquifer, there has not been a history of well interference complaints due to pumping (Water Rights, 2021d).

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.”

When considering that drawdown from pumping does not extend far from the pumping well in an unconfined aquifer, 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.

CONCLUSIONS:

1. Water Permit Application No. 8493-3 proposes to appropriate water 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, approximately 115 feet-deep, well to be located near the center of the SW ¼ Section 17 for irrigation of 130 acres located in the SW ¼ Section 17; all in T91N-R50W. The site is located approximately 5.0 miles west of Elk Point, SD.
2. Based on the hydrologic budget 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.



Blaise Hansen
SD DENR – Water Rights Program



Adam Mathiowetz, PE
SD DENR-Water Rights Program

REFERENCES:

- Bugliosi, E.F. 1986. *Water Resources of Yankton County, South Dakota*. Water Resources Investigations Report 84-4241. U.S. Geological Survey, Huron, SD.
- Farmer, J. (2018a). *Report on Water Permit Application No. 8322-3: Shawn Guthmiller*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Farmer, J. (2018b). *Report on Water Permit Application No. 8364-3: Daniel and Scott Hanson*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Goodman, J.A. (2007). *Report on Water Permit Application No. 6869-3: Lewis and Clark RWS*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 1982. *Evaluation of Ground-water Resources in Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report*. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J., Holly D.E., 1985, *Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge*. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Mathiowetz, A.W. (2020). *Personal Communication*. Engineer III. SDDENR-Water Rights Program.
- Niehus, C.A., 1994. *Water Resources of Lincoln and Union Counties, South Dakota*. USGS WRI Report 93-4195, United State Geological Survey, Rapid City, SD.

Stephens, J.C. 1967. *Geology and Water Resources of Clay County, South Dakota, Part II: Water Resources*. South Dakota DENR-Geological Survey Bulletin 19, Vermillion, SD.

Stonesifer, J. R. (2013). *Report on Water Availability of the Missouri: Elk Point aquifer*. SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

USGS (2021). *USGS Surface-Water Daily Statistics for the Nation*. From <https://waterdata.usgs.gov>, accessed 4/1/2021.

Water Rights. 1979-2019a. *"Non-Irrigation Yearly Reports, 1979-2019"*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 1979-2019b. *"1979-2019 Irrigation Questionnaires"*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 2021a. *Water Right/Permit Files*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 2021b. *Well Completion Reports*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 2021c. *Observation Well Files*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights. 2021d. *Clay County Files*. SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date February 22, 2021

RECEIVED OF Scott/Angie Hanson 47674 327th 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>8493-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$850.00
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>8493-3</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	\$1050.00

By Eric Gronlund
Chief Engineer

Em

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, April 15, 2021 1:29 PM
To: 'MelvinDonnelly@hotmail.com'
Subject: Water Permit Application No. 8493-3
Attachments: 1064.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
Water Rights Program
(605) 773-3352



AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED

APR 26 2021

WATER RIGHTS
PROGRAM

MELVIN DONNELLY
47273 324TH ST
ELK POINT SD 57025

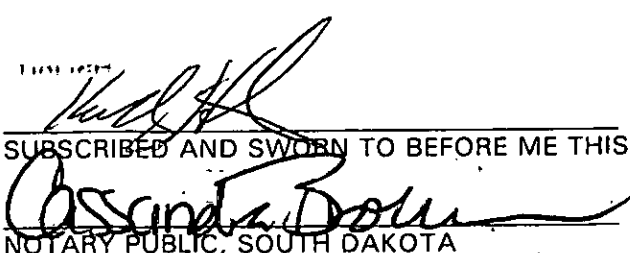
STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

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
4 + 22 NOTICE OF APPLICATIO

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 22nd DAY OF April, 2021
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$24.01 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 04/22/2021

FILED ON: 04/22/2021


SUBSCRIBED AND SWORN TO BEFORE ME THIS 22nd DAY OF April, 2021

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

Ad text : 4 + 22

NOTICE OF APPLICATION NO. 8493-3 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 from one well to be completed into the Missouri:Elk Point Aquifer (approximately 115 feet deep) located in the approximate center of the SW 1/4 Section 17 for irrigation of 130 acres located in the SW 1/4 Section 17; all in T91N-R50W. This site is located approximately 5 miles west of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8493-3 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 <http://denr.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 May 3, 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 \$24.01

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. 8493-3

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 22 day of April, 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

\$ 25.51, 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.

B. L. Odson

Subscribed and sworn to before me

this 22 day of April, 2021

My commission expires 7-12-23

SUSAN ODSON
NOTARY PUBLIC
SOUTH DAKOTA

Notary Public

NOTICE OF APPLICATION NO. 8493-3 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 from one well to be completed into the Missouri:Elk Point Aquifer (approximately 115 feet deep) located in the approximate center of the SW 1/4 Section 17 for irrigation of 130 acres located in the SW 1/4 Section 17; all in T91N-R50W. This site is located approximately 5 miles west of Elk Point, SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8493-3 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 <http://denr.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 ap-

plicant 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 May 3, 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 April 22, 2021
Published once at the total approximate cost of \$25.51
16-6-83

RECEIVED

APR 26 2021

WATER RIGHTS
PROGRAM

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, April 15, 2021 1:21 PM
To: G5 (leader1@iw.net)
Subject: 8493-3, Melvin Donnelly
Attachments: 8493-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 22, 2021 in the Leader-Courier.

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
Water Rights Program
(605) 773-3352





DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

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

April 15, 2021

Melvin Donnelly
47273 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

Water Permit Application No. 8493-3 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 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. 8493-3 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 from one well to be completed into the Missouri:Elk Point Aquifer (approximately 115 feet deep) located in the approximate center of the SW 1/4 Section 17 for irrigation of 130 acres located in the SW 1/4 Section 17; all in T91N-R50W. This site is located approximately 5 miles west of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8493-3 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 <http://denr.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 May 3, 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_

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, April 15, 2021 1:23 PM
To: Jackie Lammers (jackie.lammers@yankton.net)
Subject: 8493-3, Melvin Donnelly
Attachments: 8493-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 22, 2021 in the Leader-Courier.

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
Water Rights Program
(605) 773-3352





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

MAY 12 2021

Melvin Donnelly
PO Box 966
Elk Point SD 57025

Dear Mr. Donnelly:

Enclosed is Water Permit No. 8493-3 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.

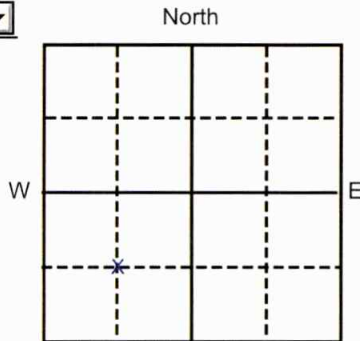
Sincerely,

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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 17 Twp 91N Rg 50WCounty UNIONPlease mark well
location with an "X"

Well Completion Date

07/08/2021

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
1400 ft. from SEPTIC TANK (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>94</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>GROUTWELI</u>	<u>10</u>	Lb/gal	<u>0</u> Ft	<u>22</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

TREMMIE

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 16 Inches Length 20 FeetMaterial SDR26Slot Size .085 Set From 94 Feet to 114 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
TOPSOIL	0	3
BROWN SANDY CLAY	3	17
FINE GREY SAND	17	83
COARSE GRAVEL	83	86
FINE GREY SAND	86	90
MED-COARSE GRAVEL	90	114
ROCKS	114	114

STATIC WATER LEVEL

22 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: 800 GPM

REMARKS

42°41'44.54"
-96°46'53.29"
per dr's log
10/14/2022 Am

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:

RECEIVED

SEP 27 2021

Date: 9/20/2021WATER RIGHTS
PROGRAM

8473-3
RECEIVED

FEB 28 2023

OFFICE OF
WATERNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE

Date

1/6/22

TO: Water Rights Program, DANR
523 E. Capitol
Pierre, SD 57501-3181

FROM:

Melvin Donnelly
(name)PO Box 966
(address)ELK POINT SD 57025
(city, state, zip)712-389-0090
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 8493-3 states that the water use system is to be constructed by

May 3 2026 (date), and water is to be put to beneficial use by May 3 2030 (date).

The water use system was completed on 7/1/21 (date).

Applying the water to beneficial use was completed on 7/10/21 (date).

You may schedule an investigation so that the water license may be issued.

Melvin Donnelly
(signature)

