

WATER PERMIT NO. 8248-3

Name of Applicant: Larry Donnelly

Address: 47423 324th St, Elk Point SD 57025 Phone: 712 899-8465

Amount of Water Claimed: ~~1.78 cfs~~ ^{no} add'l Total Acres: 133 acres

Source of Water Supply: groundwater (1existing well)

Water to be used for: irrigation County: Union

Type of Waste Disposal System:

Location: 4 miles west of Elk Point

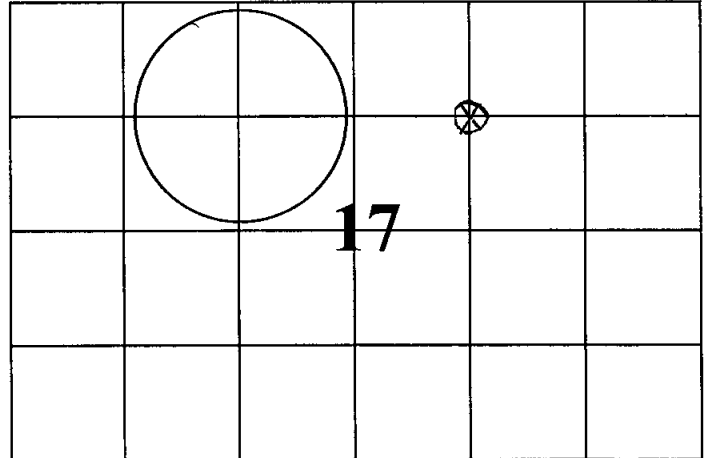
PRIORITY Date Received: 11-30-16 Application/License Fee: \$ 1050

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

Remarks: Utilitizing the well authorized under Permit No. 8080-3

Diversion Point: center of NE 1/4 Sec 17-T91N-
R50W

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



Depth of Well: 112 feet deep

Well Driller: Salmon Well Co

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 11-30-16

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8248-3</u> (office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Vermillion River</u> <u>405-356-</u>
	Newspaper <u>Leader-Examiner - Elk Point</u> <u>2632</u>
	<u>Pierre-Dakota - Yankton</u> <u>605-665-2811</u>

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Application For Permit To Appropriate Water For Irrigation

Type of Application: ☐ New ☐ Vested Right ☒ Amendment/Correction to Permit No. 8080-3
(Use predates Mar 2, 1955)

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)
Add additional 160 Acres of land using the same well

1. Name to Appear on Irrigation Permit Larry 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 47423 324th St Elk Point SD 57025
(Address) (City) (State) (Zip Code)

Phone _____ Mobile 712-899-8465 Email _____

2. Amount of water claimed _____ *CFS or no add **GPM _____ ***AF _____ Total Acreage 133
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply ground (approximate center)

4. Location of point of diversion NE 1/4 17-91N-50W
(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 May 1 - Sept 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
<u>New land to be irrigated</u>			
<u>Sec 17 NW 1/4 17-91N-50W</u>			
	<u>133</u>		

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

I plan to irrigated with center pivot the 160 Acres straight west of existing well, the two pivots w. 1) share 8080-3 well, To water crops mainly corn-soybeans

I, Larry Donnelly Farmer, 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.

**SOUTH DAKOTA
WATER PERMIT NO. 8248-3**

Date of first receipt of application November 30, 2016.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8248-3 to Larry Donnelly, 47423 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. 8248-3 authorizes irrigation of 133 new acres. Water Permit No. 8080-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Missouri:Elk Point Aquifer (112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W. This permit authorizes irrigation of 133 new acres located in the NW 1/4 Section 17-T91N-R50W from the existing well. This permit and Water Permit No. 8080-3 will authorize a total diversion rate of 1.78 cfs.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is November 30, 2016.
4. The date of approval of Permit No. 8248-3 is February 13, 2017.
5. One-fifth of the construction is to be completed on or before August 13, 2019.
6. All construction is to be completed on or before February 13, 2022.
7. Water is to be put to beneficial use on or before February 13, 2026.
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 Permit Nos. 8080-3 and 8248-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Jeanne Goodman

Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAR 06 2017

date



Form 2A

(Complete required and applicable portions only)

Supplemental Information

(type or print)

Permit
8080-3**1. Well Information** (check one or both as applicable) ☐ Drilling new well(s) ☒ Using existing well(s)a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☐ No Drilled by ____
(if yes, please provide copies of logs)b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by Soloman Well

For either Existing or Proposed Wells:

c) Well Depth (required) 113 Depth to Top of Water Bearing Material ____ Depth to Water from Surface ____

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

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) ____ Year Constructed ____

c) Connected to the City of ____ Sanitary System

3. Dugout Information

a) Surface Dimensions ____ Depth ____

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

4. Water Storage Dams

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

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

b) Freeboard ____

c) Crest Width ____

Crest Length ____

d) Height ____

e) Primary Outlet Capacity ____

If pipe, diameter ____

f) Secondary Spillway Capacity ____

Spillway Width ____

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

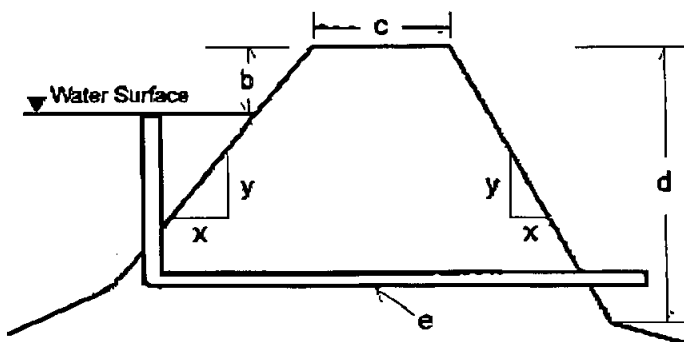
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

i) Storage ____ Acre Feet

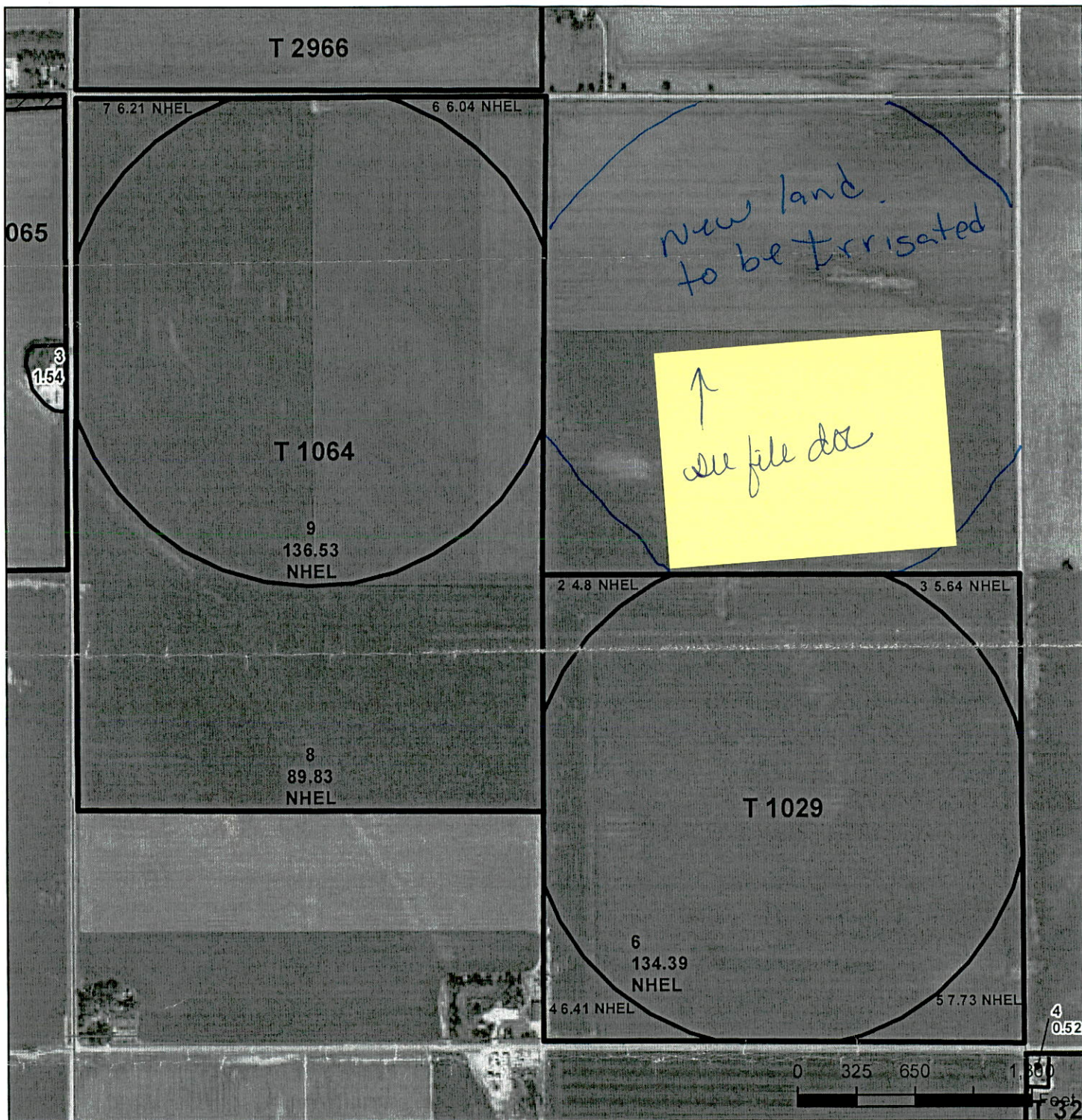
j) Drainage Area Above Dam ____ Acres





United States
Department of
Agriculture

Union County, South Dakota



Common Land Unit Tract Boundary
 Common Land Unit
 Cropland

Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation
- Compliance Provisions



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2017 Program Year

Map Created November 17, 2016

Farm 6357

17 -91N -50W

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).

Union County: [Signature] 11/28/16

Water Rights Program - File Documentation

NAME: Larry Donnelly

ADDRESS: Elk Point

DATE: 11-30-16 **COUNTY:** Union **TELEPHONE:** 712 899-8465

RE: Clarification of acres to be irrigated

COMMENTS:

I called Larry Donnelly who stated his intent for the new application is to irrigate the NW 1/4 Section 17-T91N-R50W. The application states this location, but the map submitted with the application outlined acreage located in the NE 1/4 Section 17 which is already permitted under No. 8080-3. Mr. Donnelly stated the map was in error.

The application is requesting irrigation of 133 acres located in the NW 1/4 Section 17 utilizing the existing well (authorized by Permit No. 8080-3) located in the center of the NE 1/4 Section 17; all in T91N-R50W.


Karen Schlaak
Water Rights Program

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 11/30, 20 16

RECEIVED OF Larry Donnelly 47423 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>8248-3</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>8248-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	1050 00

No. **07962**

By J. Ann Goodman
Chief Engineer

No. 8248-3

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Application no. 8248-3, Larry Donnelly

ADDRESS: COUNTY: Union County

DATE: November 30, 2016 TELEPHONE: 712 899-8465

RE: amount of water claimed.

Item No. 2 of the application indicates a pump rate of 800 gpm. The well that is authorized by Water Permit No. 8080-3 appropriates 1.78 cfs (800 gpm) for irrigation of the NE ¼ Section 17, T91N, R50W. I contacted Mr. Donnelly to ask if it was his intent was to increase the pump rate from the well from 800 gpm to 1,600 gpm to supply the pivots. Or if it was his intent to maintain the 800 gpm pump rate from the well and alterate supplying the two center pivots in the N ½ of the section.

Mr. Donnelly stated the pump rate will stay at 800 gpm and he will alternate operation of the two center pivots. He asked that I amend his application to reflect no increase in the diversion rate already authorized under No. 8080-3.

NAME: Eric Harland



**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. 8248-3, Larry 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. 8248-3, Larry Donnelly, 47423 324th Street, Elk Point SD 57025.

The Chief Engineer is recommending APPROVAL of Application No. 8248-3 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 Permit Nos. 8080-3 and 8248-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
January 20, 2017

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8248-3
LARRY DONNELLY
JANUARY 23, 2017

Water Permit Application No. 8248-3 proposes to authorize the irrigation of 133 acres located in the NW ¼ Sec. 17-T91N-R50W in Union County using the diversion rate authority permitted under Water Permit No. 8080-3. Water Permit No. 8080-3 authorizes the diversion of water from the Missouri: Elk Point aquifer at a maximum rate of 1.78 cubic feet of water per second (cfs) from one well located in the approximate center of the NE ¼ Sec. 17-T91N-R50W for the irrigation of 160 acres in the NE ¼ Sec. 17-T91N-R50W in Union County. This application, if approved, does not authorize any increase in the diversion rate permitted under Water Permit No. 8080-3. Water Permit No. 8080-3 and this application, if approved, combined would authorize the irrigation of 293 acres at a maximum diversion rate of 1.78 cfs from the Missouri: Elk Point aquifer.

AQUIFER: Missouri: Elk Point (M:EP)

Aquifer Characteristics:

The Elk Point management unit of the Missouri aquifer is an alluvium mantled outwash aquifer with materials ranging from fine sand to very coarse gravel (Niehus, 1994; Stephens, 1967). There are locations where the aquifer can be overlain by till (Niehus, 1994; Bugliosi, 1986; Stephens, 1967). The Missouri: Elk Point aquifer primarily underlies the flood plain of the Missouri River in Clay, Union, and Yankton Counties. Table 1 shows the approximate areal extent and volume of recoverable water in storage in the Missouri: Elk Point aquifer as determined by Hedges and others (1982).

County	Approximate Areal Extent (acres)	Approximate Volume of Recoverable Water in Storage (ac-ft)
Clay	74,500	1,117,500
Union	99,600	1,494,600
Yankton	45,000	675,000
Total	219,100	3,287,100

Table- Approximate areal extent and recoverable water in storage in Missouri: Elk Point aquifer (Hedges et.al, 1982)

The groundwater movement in the aquifer is generally southeast and towards the Missouri River (Stephens, 1967). The Missouri: Elk Point aquifer is hydraulically connected to the Lower James Missouri and the Lower Vermillion Missouri aquifers along its northern edge, overlies and is often hydraulically connected to the Dakota aquifer, and is hydraulically connected to the Vermillion, Big Sioux, and Missouri Rivers (Niehus, 1994; Bugliosi, 1986; Stephens, 1967). The Missouri: Elk Point aquifer is predominantly under unconfined conditions (Water Rights, 2017a and 2017c).

The well completion report for the well authorized by Water Permit No. 8080-3 indicates the Missouri: Elk Point aquifer is under unconfined conditions at the well. Aquifer materials, sand in this case, was encountered starting at 12 feet below grade and extended down to 112 feet below land surface. The well had a static water level 15 feet 9 inches below ground surface in November 2015.

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

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for this 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 the availability of unappropriated water and effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate water from the Missouri: Elk Point aquifer. The probability of unappropriated water available from the aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." 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 recharge/withdrawal issue. In this case, the aquifer is not stratigraphically lower than the Greenhorn Formation and the applicant is not a water distribution system.

Recharge and Discharge:

The Missouri: Elk Point aquifer is recharged through infiltration of precipitation, groundwater inflow from other aquifers, and streamflow losses from rivers and streams (Bugliosi, 1986). Hedges and others (1985) estimated a recharge rate to the aquifer of approximately 3.8 inches per year based on observation well analysis. Stonesifer (2013) estimated the pumping by Lewis and Clark Regional Water System induced an additional 22,582 ac-ft/yr. recharge to the aquifer. Hedges and other's (1985) and Stonesifer's (2013) recharge volumes combined is approximately 91,964 ac-ft/yr.

Discharge from the aquifer occurs through well withdrawals, outflow to the Missouri and Big Sioux Rivers when the stage of the rivers is lower than the water table of the aquifer, evapotranspiration where the aquifer is near land surface, and to the Dakota aquifer where the water table of the Missouri: Elk Point aquifer is higher than the water level of the Dakota aquifer (Niehus, 1997). Stonesifer's (2013) hydrologic budget stated there was an average annual pumpage of approximately 81,108 ac-ft/yr. from the Missouri: Elk Point aquifer at that time. Therefore, there was approximately 10,856 ac-ft/yr. of unappropriated water available for development (Stonesifer, 2013). Stonesifer (2013) also stated it is likely more recharge could be induced to the Missouri: Elk Point aquifer from the Missouri, James, and Vermillion Rivers.

The probability of unappropriated water being available for this proposed appropriation can be evaluated by considering water permits that have been issued since June 24, 2013 along with the analysis of water availability of Stonesifer (2013). The water permits that have been approved since Stonesifer's (2013) analysis of water availability was concluded are listed in Table 1. There are two deferred applications (Nos. 5749-3 and 5750-3) and two applications that have been reinstated (App. Nos. 7074A-3 and 7009A-3) from the Missouri: Elk Point aquifer (Water Rights, 2017b).

PERMIT NO.	NAME	USE	CFS	ACRES	AC-FT
7848-3	MISSOURI VALLEY FARMS INC	IRR	3.04	213	
7856-3	MIKE & STEVE ALLARD	IRR	1.78	129.3	
7895-3	TODD HANSON	IRR	1.89	180	
7898-3	JAMES ORR	IRR	1.56	132	
7899-3	JUSTIN ORR	IRR	1.56	97	
7904-3	CRAIG S MCINERNEY	IRR	1.78	160	
7933-3	DOUGLAS G BYE	IRR	0.89	90	
7936-3	DONALD JOHNSON	IRR	1.39	83	
7938-3	RUSSELL M HALL	IRR	0	53	
7941-3	JOSEPH F CHICOINE	IRR	1	37.69	
7074A-3	CALVIN HANSON	IRR	1.78	162	
7951-3	ALLEN PACE	IRR	1.78	150	
7955-3	KARL M SCHENK	IRR	1.78	140	
7971-3	BARRY VAN OSDEL	IRR	1.11	68	
7980-3	FRANCIS HEINE	IRR	0	5	
7987-3	FRANCIS M ARMSTRONG LIVING TRUST	IRR	1.78	102	
8010-3	RYAN RUSHER	IRR	0.1	2.5	
8016-3	AMELIA BERTRAND TRUST	IRR	1.67	66	
8022-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	IRR	1.91	134	
8023-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	IRR	4.14	290	
8024-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	IRR	3.36	235.2	
8025-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	IRR	3.82	267.2	
8029-3	DAKOTA DUNES COMM IMPROVEMENT DISTRICT	IRR	0.78	17.8	
8031-3	DAKOTA PROTEIN CONVERSION INC	COM	0.22		
8040-3	HEINE ELECTRIC & IRRIGATION INC	IRR/COM	0.33	3	
8069-3	CIMPLS LLC	COM	0.44		452
7009A-3	ROGER D HANSON	IRR	1.78	120	
8079-3	MELVIN & LARRY DONNELLY	IRR	1.78	160	
8080-3	LARRY & MELVIN DONNELLY	IRR	1.78	160	
8147-3	DOUG LAFLEUR	COM/LCO	1		160
8175-3	GAYVILLE-VOLIN SCHOOL DISTRICT 63-1	IRR	0.06	4	
8176-3	CALVIN & MARY HANSON	IRR	1.11	31	
8177-3	D A OLSON & SONS	IRR	1.23	62	
8181-3	MARC T BERNARD	IRR	0.89	40	
8192-3	STOP DROP LOCK INC	IRR	2.22	152	
8203-3	GERALD BENJAMIN	IRR	1.89	264	
8204-3	DOUGLAS BYE	IRR	0.89	70	
8211-3	TIMBER8 LLC	IRR	1.78	96	
8212-3	CITY OF YANKTON	MUN	20.1		6,050
8237-3	CALVIN HANSON	IRR	No Add'l	51	

IRR= Irrigation, COM= Commercial, MUN= Municipal, LCO= Livestock Confinement Operation

Table 1- Water permits approved or reinstated since the Stonesifer (2013) water availability analysis for the Missouri: Elk Point aquifer (Water Rights, 2017b)

The estimated average annual use by the irrigation permits listed in Table 1 can be calculated using a method described by Stonesifer (2013). Stonesifer (2013) calculated the average ratio of pumpage to appropriation for developed appropriations (13.7%) and applied that to the new appropriations. Kilts (2015) updated the calculations and determined the ratio of pumpage to appropriation for developed permits is 13.8%. All of the irrigation permits listed in Table 1 have appropriated two ac-ft per acre of irrigation for a total of 8,519.38 ac-ft/yr. appropriated. Applying the 13.8% to the appropriated volume of the irrigation permits shown in Table 1, the irrigation permits are expected to pump 1,112 ac-ft/yr. Using that methodology, this application is expected to pump approximately 36.7 ac-ft/yr.

Historically, non-irrigation use has been estimated by assuming pumping for 60% of the time for permits limited by only diversion rate and full volume pumping for permits limited by volume. Therefore, Water Permit No. 8031-3 is expected to pump approximately 95 ac-ft and Water Permit Nos. 8069-3 and 8147-3 are expected to pump, combined, 612 ac-ft/yr. Water Permit No. 8212-3 was approved June 21, 2016, with a qualification on the permit requiring annual reporting to the Chief Engineer of the volume of water pumped from the Missouri: Elk Point aquifer. (Water Rights, 2017b). Since the permit is new and no pumpage volume report has been filed, it is most appropriate to assume pumping under Water Permit No. 8212-3 is the full appropriated volume of 6,050 ac-ft/yr. If the deferred applications were approved, the estimated volume of pumpage under those applications would be approximately 50 ac-ft/yr.

The total estimated water use considering the pre-2013 analysis water use (81,108 ac-ft/yr.), plus post-2013 analysis expected water use (7,869 ac-ft/yr.), and the potential use by the two deferred applications (50 ac-ft/yr.) is approximately 89,027 ac-ft/yr. The difference between Stonesifer's (2013) estimated annual recharge and the estimated annual withdrawals is approximately 2,937 ac-ft/yr. This application is expected to use approximately 36.7 ac-ft/yr. Therefore, there is a reasonable probability that unappropriated water is available for this proposed appropriation.

Observation Well Data:

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

The DENR-Water Rights Program monitors 36 observation wells completed into the Elk Point management unit of the Missouri aquifer (Water Rights, 2017a). There are three observation wells within approximately five miles of the well this application proposes to use that are completed into the Missouri: Elk Point aquifer. Observation well UN-77L is approximately 1.4 miles southeast, UN-78G is approximately 4.4 miles northeast, and UN-78A is approximately 4.9 miles southeast (Water Rights, 2017a). Figures 1 through 3 show the hydrographs for the observation wells, respectively.

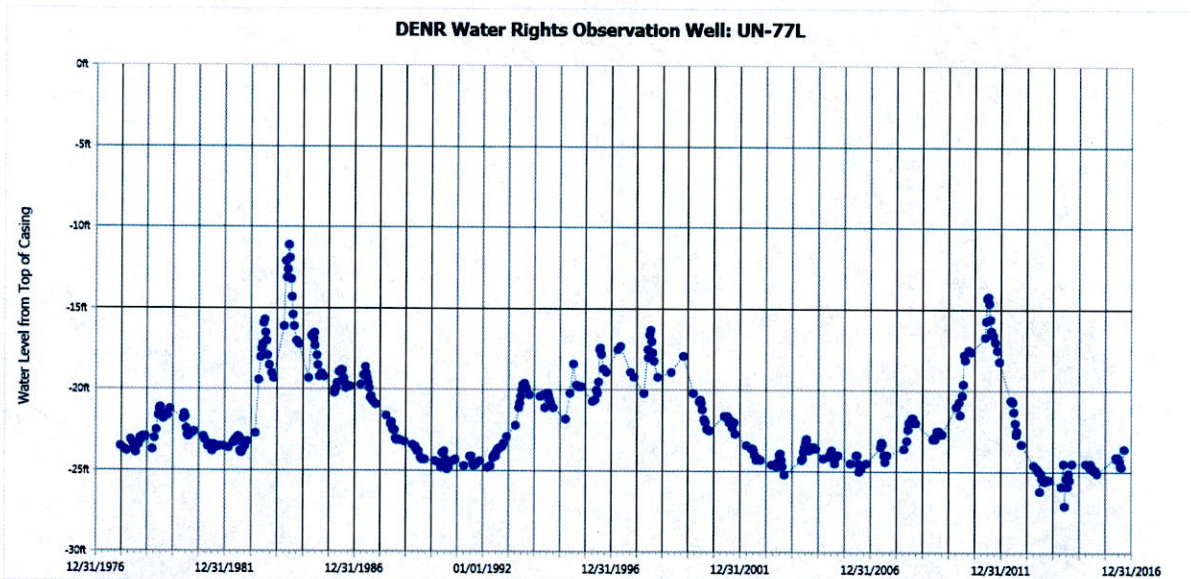


Figure 1- Hydrograph for observation well UN-77L approximately 1.4 miles southeast of the well Application No. 8248-3 proposes to use (Water Rights, 2017a)

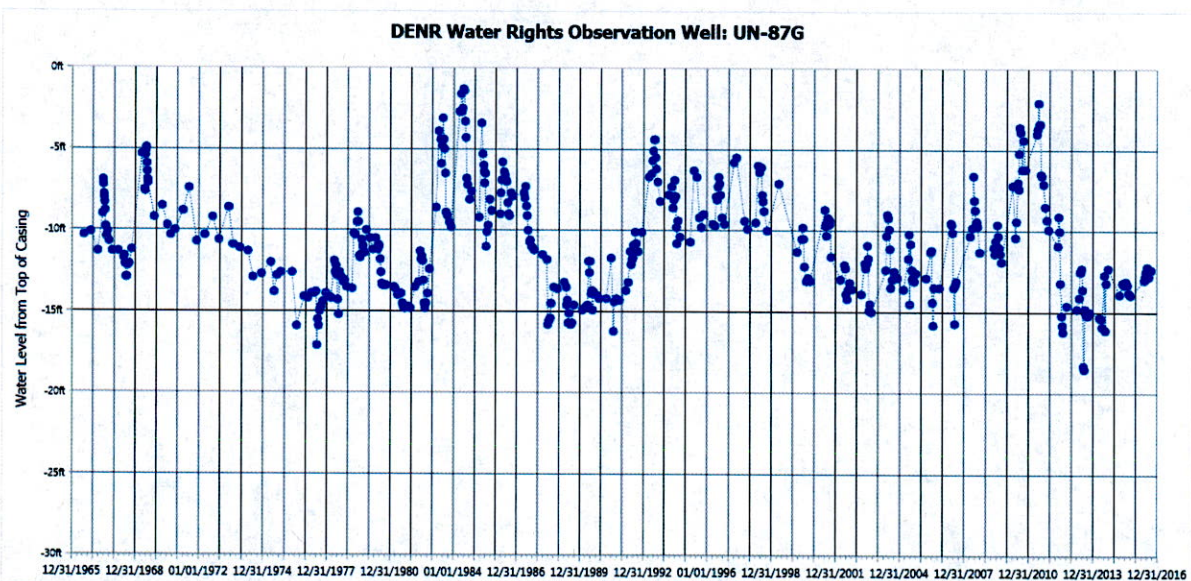


Figure 2- Hydrograph for observation well UN-78G approximately 4.4 miles northeast of the well Application No. 8248-3 proposes to use (Water Rights, 2017a)

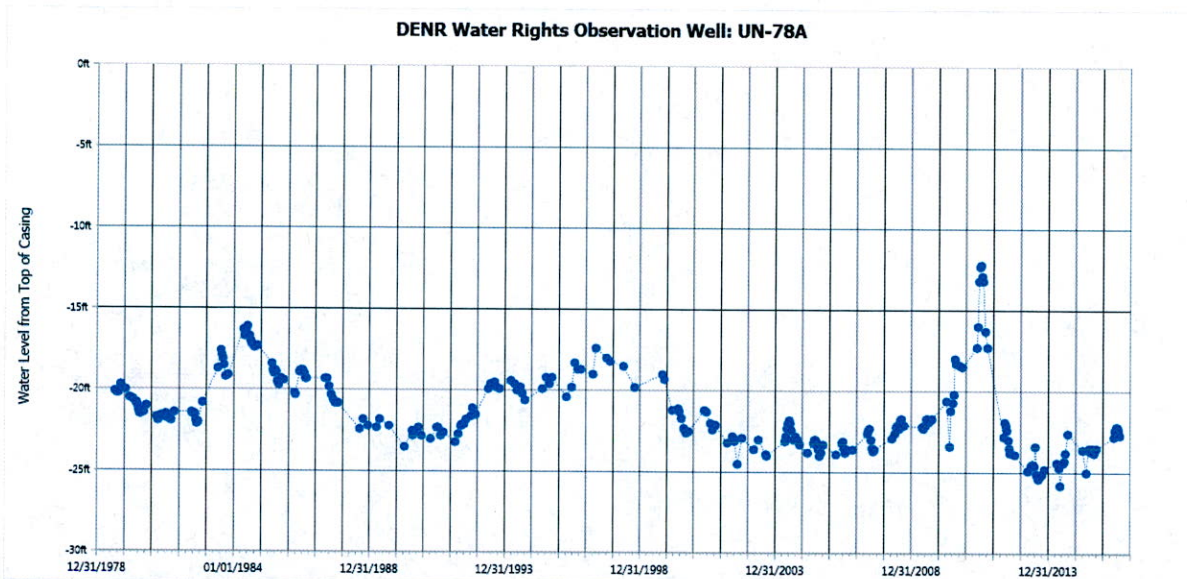


Figure 3- Hydrograph for observation well UN-78A approximately 4.9 miles southeast of the well Application No. 8248-3 proposes to use (Water Rights, 2017a)

The hydrographs shown in Figures 1 through 3 are representative of the hydrographs for the other observation wells completed into the Missouri: Elk Point aquifer (Water Rights, 2017a). These hydrographs show the Missouri: Elk Point aquifer is responsive to climatic conditions with rising water levels during wetter periods when recharge exceeds discharge and declining water levels during drier periods when discharge exceeds recharge. Observation wells completed into the Missouri: Elk Point aquifer especially those close the Missouri River show the hydraulic connection between the aquifer unit and the river. The observation wells that have a long enough period of record document the lowering of the water table in the aquifer in response to decreased flooding that resulted from the completion of the Gavins Point Dam (Stephens, 1967). The hydrographs of the observation wells also document the entrenchment of the Missouri River below the Gavins Point Dam (Goodman, 2007; Iles, 1979).

The impacts of well withdrawals on the water level are masked by climatic effects and by the effects of the hydraulic connection between the aquifer and the Missouri River. Thus, recharge to and natural discharge from the aquifer still dominate the system. Recognizing natural discharge can be captured for pumping, there is a reasonable probability that unappropriated water is available for this proposed appropriation.

EXISTING WATER RIGHTS:

There are 606 water rights/permits appropriating water and five future use permits reserving water from the Missouri: Elk Point aquifer along with two deferred applications (Water Rights, 2017b). The water rights/permits authorized to withdraw water from the Missouri: Elk Point aquifer in the vicinity of area this application proposes to irrigate are shown in Figure 4 and listed in Table 2.

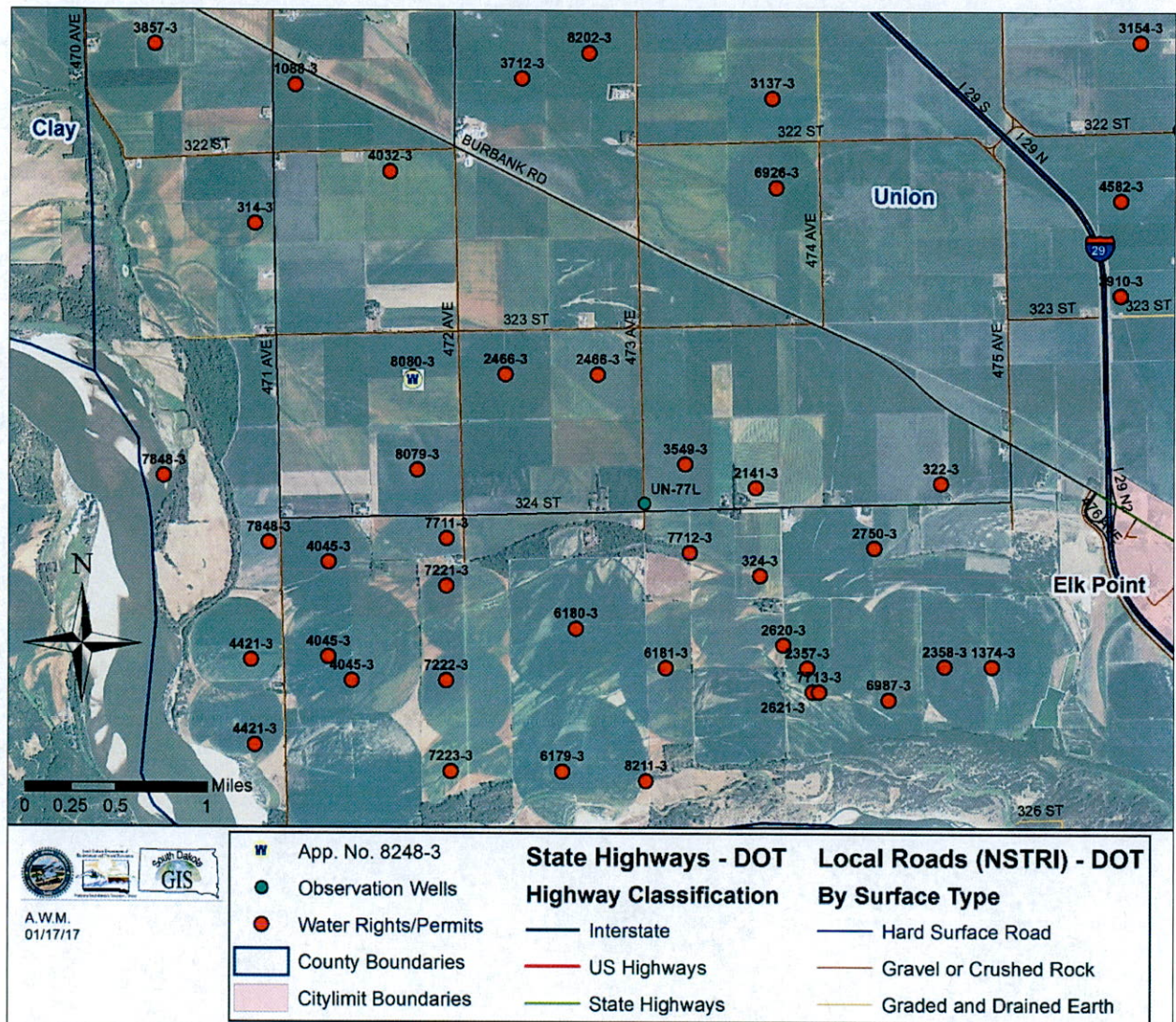


Figure 4- Map of the vicinity of Application No, 8248-3 including Missouri: Elk Point aquifer water rights/permits (Water Rights, 2017b) and observation wells (Water Rights, 2017a)

PERMIT NO.	NAME	STATUS	USE	CFS	ACRES
1088-3	MARIMAC INC	LC	IRR	1.8	125.3
1374-3	TOM CURRY	LC	IRR	2.66	295
2141-3	CALVIN L CHAUSSEE	LC	IRR	2.28	160
2357-3	JOHN CURRY	LC	IRR	1.94	136
2358-3	JOHN CURRY	LC	IRR	1.94	136
2466-3	CAROL A DONNELLY	LC	IRR	3.88	272
2620-3	MIKE CHICOINE	LC	IRR	1.94	136
2621-3	MIKE CHICOINE	LC	IRR	1.94	136
2750-3	LAWRENCE DONNELLY	LC	IRR	1.8	128
3137-3	BANKERS TRUST CO	LC	IRR	1.94	136
314-3	JAMES DONNELLY	LC	IRR	2.67	280
3154-3	WINIFRED E NABB	LC	IRR	2	140
322-3	FRED JORGENSEN & SON	LC	IRR	1.98	138.6
324-3	CALVIN L CHAUSSEE	LC	IRR	2.28	160
3549-3	MARCELLA FLANNERY ESTATE	LC	IRR	1.89	132
3712-3	GEORGE DONNELLY	LC	IRR	2	144
3857-3	DAWN GLOVER	LC	IRR	2.22	163.6
3910-3	HUGH MORRIS	LC	IRR	1.87	130
4032-3	DAWN & GARY GLOVER	LC	IRR	0.57	40
4045-3	FLOYD DAVIS	LC	IRR	9.61	673
4421-3	MISSOURI VALLEY FARMS INC	LC	IRR	3.41	239
4582-3	ED MCINERNEY	LC	IRR	1.88	132
6179-3	TIMBER8 LLC	LC	IRR	4.29	300
6180-3	TIMBER8 LLC	LC	IRR	4.44	326
6181-3	TIMBER8 LLC	LC	IRR	2	142
6926-3	CHUCK DONNELLY	PE	IRR	1.89	160
6987-3	JFR-INV-LTD LLC	LC	IRR	1.67	86
7221-3	MIKE CHICOINE	PE	IRR	2.01	141
7222-3	MIKE CHICOINE	PE	IRR	2.01	141
7223-3	MIKE CHICOINE	PE	IRR	2.01	141
7711-3	MIKE CHICOINE	PE	IRR	1.67	115
7712-3	JAMES CHICOINE	PE	IRR	1.78	74.54
7713-3	MIKE CHICOINE	PE	IRR	2.22	144.29
7848-3	MISSOURI VALLEY FARMS INC	PE	IRR	3.04	213
8079-3	MELVIN & LARRY DONNELLY	PE	IRR	1.78	160
8080-3	LARRY & MELVIN DONNELLY	PE	IRR	1.78	160
8202-3	GERALD BENJAMIN	PE	IRR	1.89	132
8211-3	TIMBER8 LLC	PE	IRR	1.78	96
LC= Water Right, PE= Water Permit, IRR= Irrigation					

Table 2- Water rights/permits in the vicinity of the well authorized by Water Permit No. 8080-3 as shown in Figure 4

Although this application does not propose to increase the 1.78 cfs maximum diversion rate authorized under Water Permit No. 8080-3, any increase of irrigated acres will result in an increase of average diversion rate over an irrigation season. There are also domestic wells in the area of the well this application proposes to use (Water Rights, 2017c). The Missouri: Elk Point aquifer is unconfined with relatively thick saturated thickness and a high transmissivity. Figure 4 also shows a proliferation of irrigation wells in the area and there has not been a history of well interference issues from the Missouri: Elk Point aquifer. The hydrographs for the observation

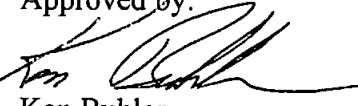
wells in the area (see Figures 1 through 3) show well withdrawals have minimal effects on the water level of the aquifer. Observation well UN-77L is within one mile of seven high capacity irrigation wells. The hydrograph for UN-77L (Figure 1) shows minimal effects on the water level caused by pumping the irrigation wells. While precise drawdown cannot be calculated without aquifer testing, the Water Management Board has consistently recognized that to place water to maximum beneficial use some drawdown must occur. When all of that is considered, adequate wells as defined in ARSD 74:02:20(6) are not expected to be adversely or unlawfully impaired if this proposed appropriation is approved.

CONCLUSIONS:

1. Application No. 8248-3 proposes to divert water from the Missouri: Elk Point aquifer for the irrigation of 133 acres in Union County using an existing well and the diversion rate authority authorized by Water Permit No. 8080-3.
2. Water Permit No. 8080-3 authorizes the irrigation of 160 acres in Union County at a maximum diversion rate of 1.78 cfs from the Missouri: Elk Point aquifer.
3. Combined, Water Permit No. 8080-3 and Application No. 8248-3, if approved, would authorize the irrigation of 293 acres and a diversion rate of 1.78 cfs from one well completed into the Missouri: Elk Point aquifer.
4. Based on the observation well data and a comparison of recharge to and discharge from the aquifer, there is a reasonable probability unappropriated water is available for this proposed appropriation.
5. There is a reasonable probability water can be pumped for this proposed appropriation without adversely or unlawfully impacting existing appropriative or domestic users.


Adam Mathiowetz, PE
SD DENR-Water Rights Program

Approved by:


Ken Buhler
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, South Dakota.
- Goodman, J.A. 2007. Report on Water Permit Application No. 6869-3 for Lewis and Clark RWS: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Hedges, L.S., Allen, J. and 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.
- 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.
- Iles, D.L. 1979. Ground-water Study for Southern Union County. Open File Report UR-28. SD DENR-Geological Survey. Vermillion, South Dakota.
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- Niehus, C.A. 1994. Water Resources of Lincoln and Union Counties, South Dakota. U.S. Geological Survey Water-Resources Investigations Report 93-4195. U.S. Geological Survey. Rapid City, South Dakota.
- Stephens, J.C. 1967. Geology and Hydrogeology of Clay County, South Dakota, Part II: Water Resources. South Dakota DENR-Geological Survey Bulletin 19, 62 p. Vermillion, South Dakota.
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- Water Rights. 2017b. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2017c. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

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

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 2 day of February, 2017

and that the succeeding publications were

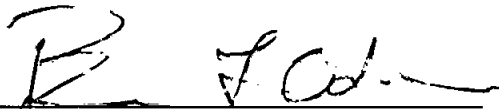
on Thursday, the _____ day of _____,

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

\$ 28.27, 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 2 day of February, 2017

My commission expires 6-21-17

SUSAN ODSON
NOTARY PUBLIC
SOUTH DAKOTA



Notary Public

NOTICE OF APPLICATION

NO. 8248-3

TO APPROPRIATE WATER

Notice is given that Larry Donnelly, 47423 324th St, Elk Point SD 57025 has filed an application for a water permit to irrigate 133 new acres. Water Permit No. 8080-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Missouri:Elk Point Aquifer (112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W. This application proposes to irrigate 133 new acres located in the NW 1/4 Section 17-T91N-R50W from the existing well. This application, if approved, and Water Permit No. 8080-3 will authorize a total diversion rate of 1.78 cfs.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8248-3 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 Eric Gronlund 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 February 13, 2017.

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. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Publish Feb. 2, 2017
Published once at the total approximate cost of \$28.27 5-2-92

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FEB - 6 2017

WATER RIGHTS PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED
FEB - 6 2017
WATER RIGHTS
PROGRAM

LARRY DONNELLY
47423 324TH ST
ELK POINT SD 57025

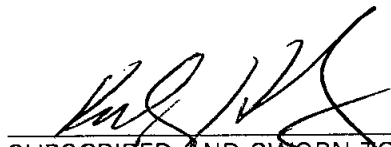
STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

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
2 + 2 NOTICE OF APPLICATIO

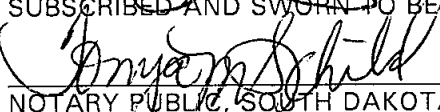
TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 2nd DAY OF February, 2017
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$28.09 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 02/02/2017

FILED ON: 02/02/2017



SUBSCRIBED AND SWORN TO BEFORE ME THIS 2nd DAY OF February, 2017



NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 08/19/2021

NOTICE OF APPLICATION NO. 8248-3 to Appropriate Water

Notice is given that Larry Donnelly, 47423 324th St, Elk Point SD 57025 has filed an application for a water permit to irrigate 133 new acres. Water Permit No. 8080-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Missouri:Elk Point Aquifer (112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W. This application proposes to irrigate 133 new acres located in the NW 1/4 Section 17-T91N-R50W from the existing well. This application, if approved, and Water Permit No. 8080-3 will authorize a total diversion rate of 1.78 cfs.

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Steven M. Pirner, Secretary, Department of Environment and Natural Resources.
Published once at the total approximate cost of \$28.09.

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, January 25, 2017 8:36 AM
To: G5 (leader1@iw.net)
Subject: 8248-3, Larry Donnelly
Attachments: 8248-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on February 2, 2017.

Larry Donnelly, 47423 324th St, Elk Point SD 57025 (712 899-8465) 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.

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

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, January 25, 2017 8:37 AM
To: 'Tera Schmidt'
Subject: 8248-3, Larry Donnelly
Attachments: 8248-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on February 2, 2017.

Larry Donnelly, 47423 324th St, Elk Point SD 57025 (712 899-8465) 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.

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

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352



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 NEWSPAPER(S) RIGHT AWAY.**

January 25, 2017

Larry Donnelly
47423 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

Water Permit Application No. 8248-3 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 newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(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. 8248-3 to Appropriate Water

Notice is given that Larry Donnelly, 47423 324th St, Elk Point SD 57025 has filed an application for a water permit to irrigate 133 new acres. Water Permit No. 8080-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Missouri:Elk Point Aquifer (112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W. This application proposes to irrigate 133 new acres located in the NW 1/4 Section 17-T91N-R50W from the existing well. This application, if approved, and Water Permit No. 8080-3 will authorize a total diversion rate of 1.78 cfs.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8248-3 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 Eric Gronlund 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 February 13, 2017.

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.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

MAR 06 2017

Larry Donnelly
47423 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

Enclosed is Water Permit No. 8248-3 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,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

8248-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

April 25, 2017

8248-3

Larry Donnelly
47423 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your irrigation system.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

8248-3
RECEIVED

APR 17 2017

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 4-10-17TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

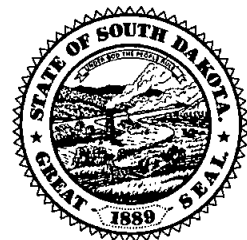
FROM:

Larry Donnelly
(name)47423 324th St.
(address)Sioux Falls S.D. 57025
(city, state, zip)712-899-8465
(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. 8248-3 states that the water use system is to be constructed by4-10-17
(date), and water is to be put to beneficial use by July 2017
(date)The water use system was completed on 4-10-17
(date)Applying the water to beneficial use was completed on 4-10-17
(date)

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

Larry Donnelly
(signature)

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8080-3 & 8248-3

I have this day, October 19, 2016, made a thorough examination of the water use system constructed by Larry Donnelly, 47423 324th St, Elk Point SD 57025 of Permit No. 8080-3, bearing the priority of January 20, 2015 authorizing the diversion of 1.78 cu. ft. per second of the waters of Missouri:Elk Point Aquifer for irrigation of 160 acres & No. 8248-3 bearing the priority of November 30, 2016 authorizing the irrigation of 133 new acres from the existing well all in Union County.

Inspection contact & relationship **Larry Donnelly, permit holder**
to permit holder, if applicable:

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Salmon Well Co.
- 2) No. of Wells 1
- 3) Depth(s) 115 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 16 inches
- 2) Length 85 feet
- 3) Type PVC

Screen:

- 1) Type PVC Manufactured
- 2) Length 30 feet
- 3) Static water level 16 feet

Pump:

- 1) Make Grundfos Submersible
- 2) Model Unknown
- 3) Capacity 800 GPM

Motor:

- 1) Make Grundfos Submersible
- 2) Model No. Unknown
- 3) Horsepower rating 40 hp

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

- 1) Type PVC 2) Size 8 inches 3) Length 2600 feet

Comments: See map for approximate location.

C. Works used to apply water to beneficial use:

Center pivot (NE ¼ Sec 17-T91N-R50W):

- 1) Make Lindsay
2) Overall length 1301 feet
3) Number of towers 7
4) End gun Yes
5) Capacity 800 GPM

Center pivot (NW ¼ Sec 17-T91N-R50W):

- 1) Make Lindsay
2) Overall length 1301 feet
3) Number of towers 7
4) End gun Yes
5) Capacity 800 GPM

Comments: System is set up so that only one center pivot can be operated at a time.

Chemigation Equipment:

- 1) Does chemigate No

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes

List any extended period of nonuse: None

- 3) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: West 1340', South 1340' from NE Corner of Sec 17-T91N-R50W; Lat 42.70305/Long -96.77178; approximate center of NE ¼ Sec 17-T91N-R50W.

Report of Examination of Works

Permit No. 8080-3 & 8248-3

2. The works are capable of diverting and conveying to the place of use 1.78 cfs or 800 gpm of water which is to be used for irrigation for Water Permit 8080-3 and Water Permit 8248-3 combined. Water has been put to beneficial use to the maximum extent as follows:

All land is located in Sec 17-T91N-R50W.

Water Permit 8080-3/135 ac

NW 1/4 NE 1/4 - 34 ac

SW 1/4 NE 1/4 - 35 ac

NE 1/4 NE 1/4 - 33 ac

SE 1/4 NE 1/4 - 33 ac

Water Permit 8248-3/133 ac

NW 1/4 NW 1/4 - 32 ac

SW 1/4 NW 1/4 - 33 ac

NE 1/4 NW 1/4 - 34 ac

SE 1/4 NW 1/4 - 34 ac

comprising a total of 268 acres of land and the license should be issued for 1.78 cfs or 800 gpm for Water Permit 8080-3 and Water Permit 8248-3 combined.

3. All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project:

Permit holder recently applied and was issued Water Permit 8248-3 to irrigate 133 new acres in NW 1/4 Sec 17-T91N-R50W with an additional center pivot from the existing well for Permit 8080-3. The final inspection, report and license for Water Permit 8080-3 was completed prior to issuance of Water Permit 8248-3.



Harold Holoch, PE
Staff Engineer
DENR, Water Rights Program

Date report completed: May 30, 2017

8248-3

8080-3

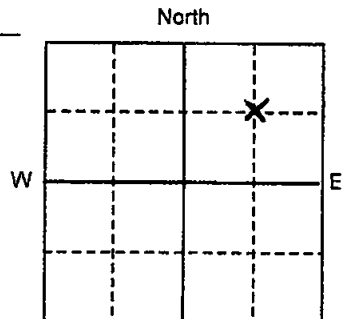
SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location center 1/4 NE 1/4 Sec 17 Twp 91N Rg 50WCounty Union

Please mark well location with an "X"



Well Completion Date

11/10/15Distance 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>sch40</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>82</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	<u>0</u> Ft	<u>45</u> Ft
		Lb/gal	_____ Ft	_____ Ft

Describe grouting procedure

Pressure Grouted

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 16 Inches Length 30 Feet
Material PVCSlot Size .080" Set From 82 Feet to 112 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:

Larry Donnelly

Business Name:

Address: 47423 324th St.City, State, Zip: Elk Point, SD. 57025

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Gumbo clay</u>	<u>0</u>	<u>12</u>
<u>Sand w/ clay layers</u>	<u>12</u>	<u>45</u>
<u>Sand + small gravel</u>	<u>45</u>	<u>83</u>
<u>Coal layer</u>	<u>83</u>	<u>85</u>
<u>Gravel</u>	<u>85</u>	<u>94</u>
<u>coal layer</u>	<u>94</u>	<u>98</u>
<u>Gravel w/ cobble</u>	<u>98</u>	<u>112</u>

STATIC WATER LEVEL

15.9'

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

33.6" Ft. After 1 Hrs. pumped 1000 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate:

800 GPM

REMARKS

Permit # 8080-3MISSOURI: Elk Point

This well was drilled under license #

763

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:

Larry Donnelly

Date:

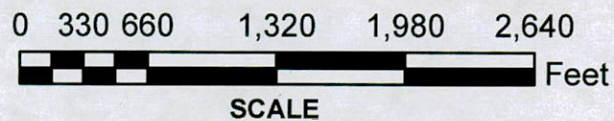
11/17/15

RECEIVED

DEC - 7 2015

WATER RIGHTS
PROGRAM

8080-3 & 8248-3



Harold Holoch
Harold Holoch, PE
Staff Engineer
May 24, 2017

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCESJOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

OCT 10 2017

8080-3
8248-3Larry Donnelly
47423 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

Enclosed is Water License No. 8248-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if in the future, the owner of an existing well, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Note: Upon licensing, the applicable portions of Water Permit No. 8080-3 were incorporated into Water License No. 8248-3.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 8248-3

(1) Larry Donnelly, 47423 324th St, Elk Point SD 57025 made Application No. 8248-3, November 30, 2016 for a water permit to irrigate an additional 133 acres from an existing well (Missouri Elk Point Aquifer), located in Union County, South Dakota. Permit No. 8248-3, with a priority date of November 30, 2016 was approved February 13, 2017 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before February 13, 2022 and for the application to beneficial use of said water on or before February 13, 2026.

Water Permit No. 8080-3, with a priority date of January 20, 2015, authorizes diversion of 1.78 cubic feet of water per second (cfs) from a well located in the center of the NE ¼ Section 17 to irrigate the NE ¼ Section 17, T91N, R50W. Water Permit No. 8248-3 authorizes irrigation of the NW ¼ Section 17, T91N R50W from the existing well with no additional diversion authority.

The applicable portions of Water Permit No. 8080-3 are incorporated into Water License No. 8248-3. Priority dates are as follows:

- January 20, 2015 for 1.78 cfs and the NE ¼ Section 17, T91N, R50W (established under No. 8080-3);
- November 30, 2016 for the NW ¼ Section 17, T91N, R50W (established under No. 8248-3).

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to divert 1.78 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,340'W and 1340'S of the NE corner of Sec 17, T91N, R50W (approximate center of NE ¼)
Lat 42.70305 Long -96.77178

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

Section 17, T91N, R50W

NW ¼ NE ¼	34 acres	NW ¼ NW ¼	32 acres
SW ¼ NE ¼	35 acres	SW ¼ NW ¼	33 acres
NE ¼ NE ¼	33 acres	NE ¼ NW ¼	34 acres
SE ¼ NE ¼	33 acres	SE ¼ NW ¼	34 acres

Total – 268 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Larry Donnelly, 47423 324th St, Elk Point SD 57025 the holder and/or owner of Incorporated Water Right No. 8248-3 is issued a license to appropriate water, the right to use 1.78 cubic feet of water per second from ground water, one well (Missouri Elk Point Aquifer) with priority dates of January 20, 2015 and November 30, 2016 from the location specified in (2) of this license for irrigation purposes.

continued

This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Right No. 8248-3 and subject to the following qualifications:

- The well approved under this Permit 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.
- The well authorized by Permit No. 8080-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the 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. *The well authorized under No. 8080-3 was drilled by Salmon Well Company in November, 2015. A copy of the well completion report is on file with the Water Rights Program.*
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

OCT 10 2017

date

