

WATER PERMIT NO. 8593-3

Name of Applicant: Chad Dylla

Address: 20463 432nd Ave, De Smet SD 57231

Phone: 605 860-8705

Amount of Water Claimed: 1.34 cfs

Total Acres: 80

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Kingsbury

Type of Waste Disposal System:

Location: 1 mile northwest of De Smet

PRIORITY

Date Received: 2-11-22

Application/License Fee: \$950

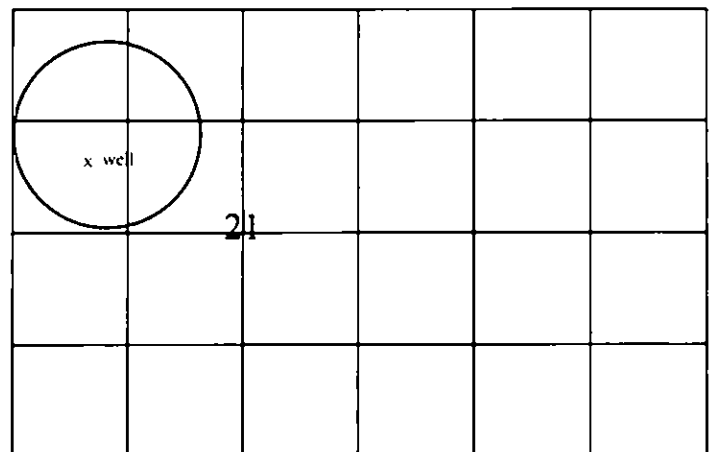
Corrected Application Received:

Period of Annual Use: April 1 – September 30

Remarks:

Diversion Point: SW ¼ NW ¼ Sec 21-T111N-R56W

Land to be Irrigated: NW¼ Sec 21-T111N-R56W



Depth of Well: 66 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 2-15-22

By: Ron Duvall

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 8593-3

Date of first receipt of application February 11, 2022.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8593-3 to Chad Dylla, 20463 432nd Ave, DeSmet SD 57231 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. 8593-3 appropriates 1.34 cubic feet of water per second (cfs) from one well to be completed into the Vermillion East Fork Aquifer (approximately 66 feet deep) located in the SW 1/4 NW1/4 section 21 for irrigation of 80 acres located in the NW 1/4 section 21; all in T111N-R56W. This site is located approximately one mile northwest of De Smet 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 11, 2022.
4. The date of approval of Permit No. 8593-3 is April 18, 2022.
5. One-fifth of the construction is to be completed on or before October 18, 2024.
6. All construction is to be completed on or before April 18, 2027.
7. Water is to be put to beneficial use on or before April 18, 2031.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8593-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8593-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8593-3 authorizes a maximum diversion rate of 1.34 cfs for the irrigation of 80 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

JUN 01 2022
date



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

RECEIVED

FEB 11 2022

PAID

FEB 11 2022

Ck# 148541

Rec't#

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8593-3</u>	(office use only) Hydrologic Unit <u>10170103</u>	WATER RIGHTS PROGRAM
	Basin <u>Vermillion River</u>		
	Newspaper <u>Kingsbury Journal</u>		
	<u>Plainsman</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 CHAD DYLLA

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

Mailing Address 20463 432ND AVE DESMET SD 57231
(Address) (City) (State) (Zip Code)

Phone 605-860-8705 Mobile 605-860-8705 Email _____

2. Amount of water claimed 1.34 *CFS or 600 **GPM ***AF Total Acreage 60 80
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply WELL

4. Location of point of diversion 1 WELL IN THE SW 1/4 OF THE NW 1/4 SECT 21 TWP111 R 56W
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County KINGSBURY

5. County or counties where water will be used KINGSBURY

6. Annual period during which water is to be used APRIL TO 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
NW 1/4 OF THE NW 1/4 SECT21 T111 R56W	<u>12 40</u>		
SW 1/4 OF THE NW 1/4 SECT21 T111 R56W	<u>28</u>		
SE 1/4 OF THE NW 1/4 SECT21 T111 R56W	<u>28</u>		
NE 1/4 OF THE NW 1/4 SECT21 T111 R56W	<u>12 40</u>		

8. Give a description of the project. (Attach sheet if more space is needed)
NEW CENTER PIVOT FED BY NEW WELL IN THE SW 1/4 OF SEC 21 T111 R56W

I, Chad Dylla, 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 ____ Have test holes been drilled ☒ Yes ☐ No Drilled by THEIN WELL DRILLING
(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) 66 Depth to Top of Water Bearing Material 7 Depth to Water from Surface 7

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)

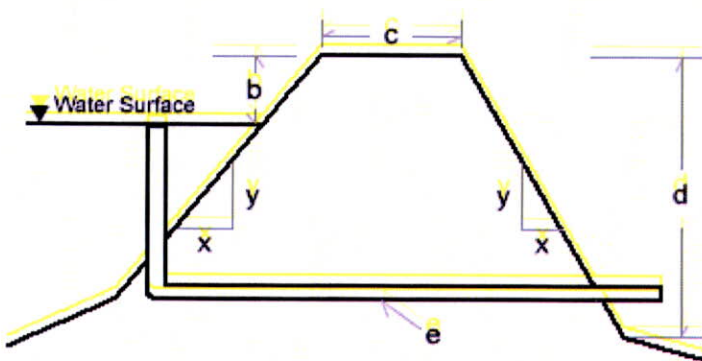
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

i) Storage ____ Acre Feet

j) Drainage Area Above Dam ____ Acres

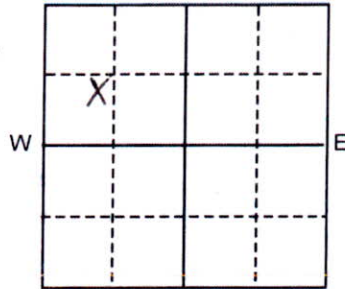


SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 NW 1/4 Sec 21 Twp 111 Rg 56County Kingsbury

North

Please mark well
location with an "X"

Well Completion Date

1/11/2022

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:

MUD ROTARY

CASING DATA:

☐ Steel ☐ Plastic ☐ Other

If other describe _____

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

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
BENTONITE	7	Lb/gal	0.0 Ft	75.0 Ft
		Lb/gal	_____ Ft	_____ Ft

Describe grouting procedure _____

SCREEN:

☐ Perforated pipe ☐ Manufactured

Diameter _____ Inches Length _____ Feet

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☐ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? _____

 Lab to which water ☒ No, Why Not? TEST HOLE
 quality sample sent for analysis
Well Owner: CHAD DYLLA

Business Name: _____

Address: 20463 432ND AVECity, State, Zip: DE SMET SD 57231

WELL LOG:

DEPTH

FORMATION	FROM	TO
TOP SOIL	0	2
SAND	2	66
BLUE CLAY	66	75

STATIC WATER LEVEL

FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

 TEST HOLE NW QTR SECTION 21
 N 44 24.4750 W 97 34.0930

 This well was drilled under license # 475 and this
 report is true and accurate.
Drilling firm: THEIN WELL COMPANY, INC

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder: _____

Date: _____

CHAD DYLLA

Legend

● SD T111N R56W

Section # 21 Desmet

TH # 1 75'

206th St

206th St

206th St

432nd Ave

Google Earth

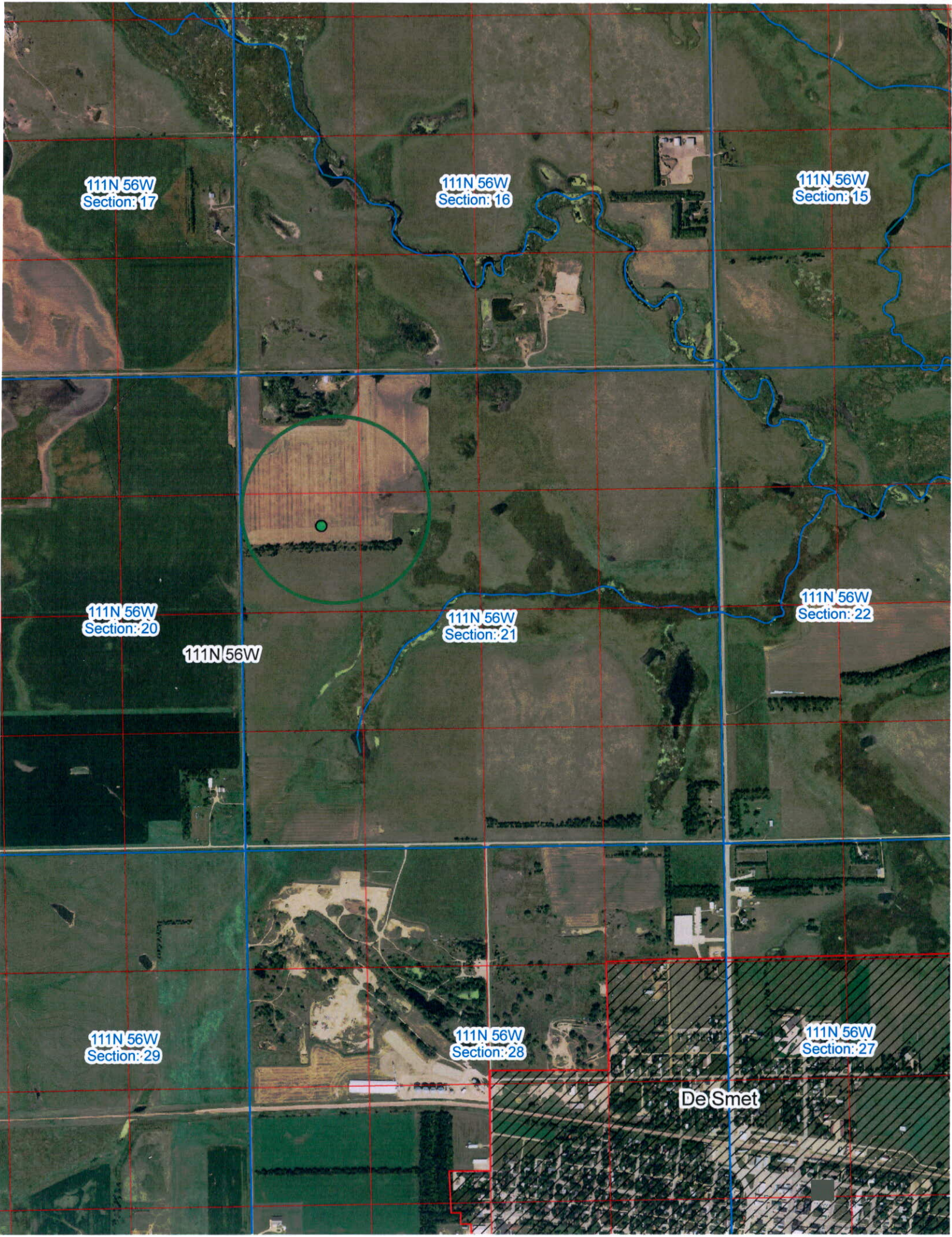
Pra

25

3000 ft

N





111N 56W
Section: 17

111N 56W
Section: 16

111N 56W
Section: 15

111N 56W
Section: 20

111N 56W

111N 56W
Section: 21

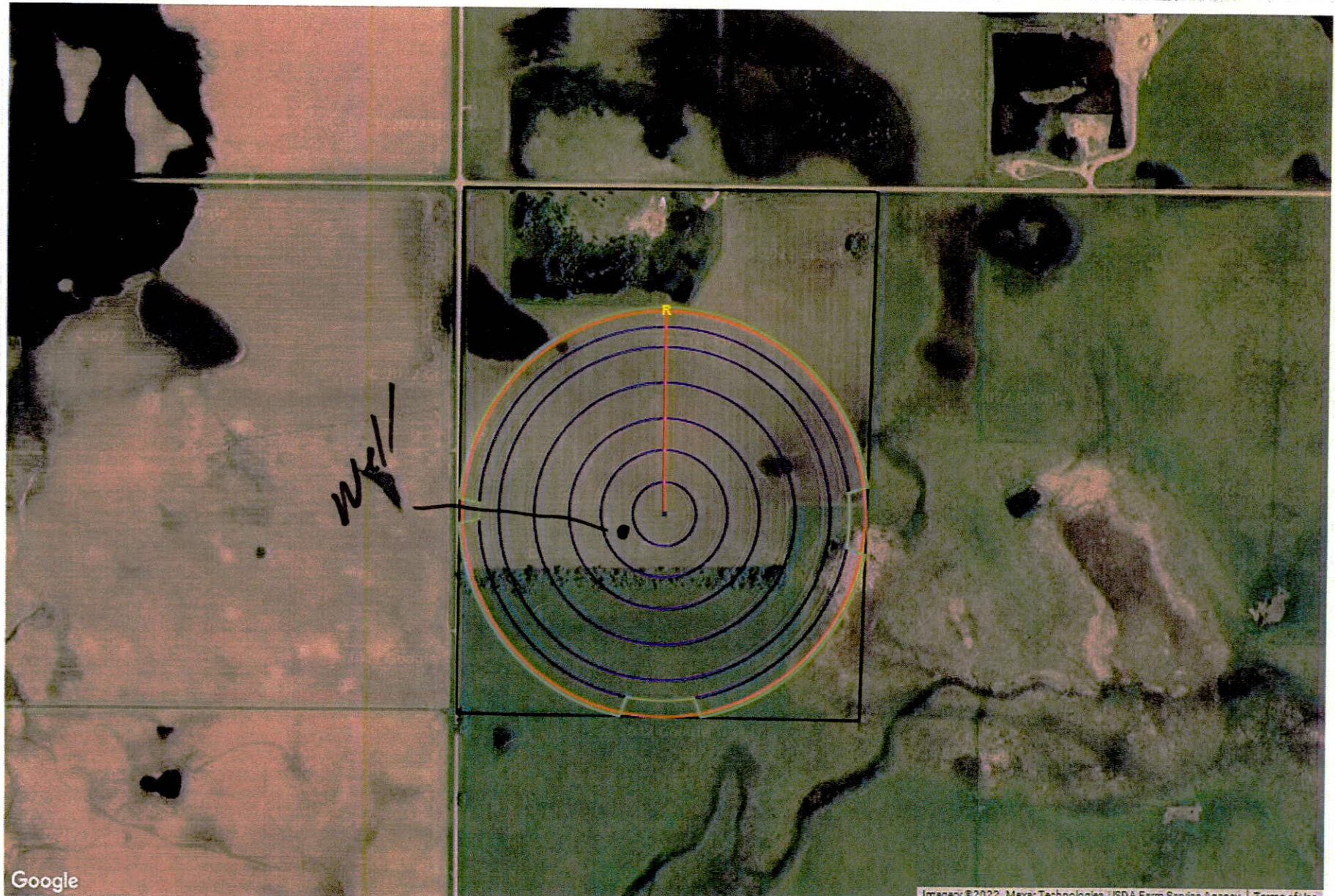
111N 56W
Section: 22

111N 56W
Section: 29

111N 56W
Section: 28

111N 56W
Section: 27

De Smet



— DRIVE UNITS
 — LARGEST POTENTIAL MACHINE
 — GUIDANCE PATH
 — END OF MACHINE
 — PRIMARY ENDGUN
 — SECONDARY ENDGUN
 — FIELD BOUNDARY

Johnson Construction, LLC

Since 1982

~ Pea Rock
Preparation
Tiling
er ~ Excavators
Hwy. 34, P.O. Box 4222
Madison, SD 57042

DE SMET 'N' DIRECTORY
(Residents & Owners or Renters)

R-55-56-W



SECTION 27

- SECTION 33**
- 1 VanScharrel, Bryan 702
2 Baszler, Jason 715
3 Baszler, Jim 713
4 Jensen, John 615

- 11 Minier, G 616
12 Smith, Justin 612
13 Burgers, Bob 610
14 Hanson, Pat 20733

- 11 Minier, G 616
12 Smith, Justin 612
13 Burgers, Bob 610
14 Hanson, Pat 20733

Short System

Project Name - CHAD DYLLA
Version Name - CHAD DYLLA_Version
Map Summary Report - CHAD DYLLA

Field Name	Design Name	Machine Category	Machine Area (ac)	No. of Towers	Total Machine Length (ft)	Total Irrigated Area (ac)
Pivot_1_1312022155645128	CHAD DYLLA	Large Field Electrical Pivot 8000	75.75	5	941.44	76.61

Total Project Irrigated Area (ac): 76.61

(CHAD DYLLA)	Spans and Overhang	Corner	Endgun*	Bender / DropSpan	Polygon
Irrigated Area using (ac)	64.15	0	12.46	0	0.00

* Estimated

Total Span Length (ft) 840.00

Overhang Length (ft) 100.40

Flex/Transition/Other Lengths (ft) 1.04

S.No	Diameter	Length (ft)	Cable Size	Motor Options	Tire Size	Bender / DropSpan	Profile
1	6 5/8	160.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard
2	6 5/8	160.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard
3	6 5/8	160.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard
4	6 5/8	180.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard
5	6 5/8	180.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard

Primary Endgun

Endgun Angles (CHAD DYLLA)	Endgun 1	Endgun 2
Start Angle	99.72 deg	191.47 deg
End Angle	170.53 deg	83.77 deg

Field Name	Latitude	Longitude	Pivot Road Angle	Pivot Road Offset	Start Angle	End Angle
Pivot_1_1312022155645128	44.40774966243299	-97.56800744995999	-	-	0 deg	360 deg



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

File No. 8593-3

WATER RIGHTS PROGRAM -- FILE DOCUMENTATION

NAME: Chad Dylla

ADDRESS: 20463 432nd Ave, DeSmet SD 57231

DATE: February 15, 2022

PHONE: 605.860.8705

RE: Water Permit Application No. 8593-3

COMMENTS:

I contacted Mr. Dylla to confirm he owned the property or had authority to submit the application if it was owned by someone else. Mr. Dylla indicated that he had recently purchased the property from Doris Cummins who was listed in the county plat book as being owner.

I also asked about the total number of acres listed not matching the number described in No. 7 on the application. After discussion it was decided to change the total acres to 80 acres.

Ron Duvall, Water Rights Permitting Administrator
SD DANR, Water Rights Program

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date February 11, 2022

RECEIVED OF Chad/Vicki Dylla 20463 432nd Ave., Desmet SD 57231

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

Fee for Application for Permit No. <u>8593-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>750.00</u>
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8593-3</u>	\$ <u>200.00</u>
Fee for Filing Transfer Form _____	\$ _____
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law) TOTAL	\$ <u>950.00</u>

By Eric Gronlund
Chief Engineer
ERG



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8593-3, Chad Dylla**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Agriculture and Natural Resources concerning Water Permit Application No. 8593-3, Chad Dylla, 20463 432nd Avenue, De Smet SD 57231.

The Chief Engineer is recommending APPROVAL of Application No. 8593-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board with the following qualifications:

1. The well approved under Water Permit No. 8593-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8593-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8593-3 authorizes a maximum diversion rate of 1.34 cfs for the irrigation of 80 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund, Chief Engineer
March 25, 2022

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8593-3
CHAD DYLLA
MARCH 25, 2022

Water Permit Application No. 8593-3 proposes the irrigation of 80 acres from one well approximately 60 feet deep to be completed into the Vermillion East Fork aquifer and located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 21- T111N-R56W. The acres to be irrigated are located in the NW $\frac{1}{4}$ Section 21- T111N-R56W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. The project site is located approximately one mile northwest of De Smet.

AQUIFER: Vermillion East Fork (VEF)

Aquifer Characteristics:

The Vermillion East Fork aquifer primarily lies within or adjacent to the floodplain of the East Fork of the Vermillion River (Hedges et al, 1982). The aquifer is comprised of medium to very coarse sand and fine gravel and alluvium (SDGS, 2022; Water Rights, 2022c and 2022e). Hansen (2020) described how the entire aquifer is managed as five named management units and one unnamed management unit. The management units are shown in Figure 1. This application proposes to withdraw from the unnamed management unit. For the remainder of this report, the unnamed management unit is referred to as the Vermillion East Fork aquifer or “the aquifer”.

The aquifer is primarily found at or near land surface but may be buried by up to 120 feet of overburden (Hamilton, 1989) and is generally under unconfined conditions (Water Rights, 2022c and 2022e). The Vermillion East Fork aquifer has an approximate areal extent of 42,500 acres (Stonesifer, 2013). The aquifer is further described by Hansen (2020). The test hole completion report submitted with this application identified sand from 2 to 66 feet below ground surface. This is consistent with the Vermillion East Fork aquifer.

SOUTH DAKOTA CODIFIED LAW (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, “A permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant’s proposed use, that the diversion point can be developed without unlawful impairment of existing domestic water uses and water rights, and that the proposed use is a beneficial use and in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board as defined by SDCL 46-2-9 and 46-2-11.” This report will address the availability of unappropriated water and the potential for unlawful impairment of existing domestic water uses and water rights from the Vermillion East Fork aquifer.

WATER AVAILABILITY:

This application proposes to appropriate water from the Vermillion East fork aquifer. The probability of unappropriated water available from the aquifer can be evaluated by considering SDCL 46-6-3.1, which requires the amount of water withdrawn annually to not exceed the average estimated recharge unless the aquifer is older or lower than the Greenhorn Formation and the applicant is a water distribution system. The Vermillion East Fork aquifer is not stratigraphically lower/older than the Greenhorn Formation (Fahrenbach et al, 2010), and the applicant is not a water distribution system as defined in SDCL 46-1-

6(17). Therefore, a comparison of average annual recharge and average annual withdrawals from the Vermillion East Fork aquifer is required for this application.

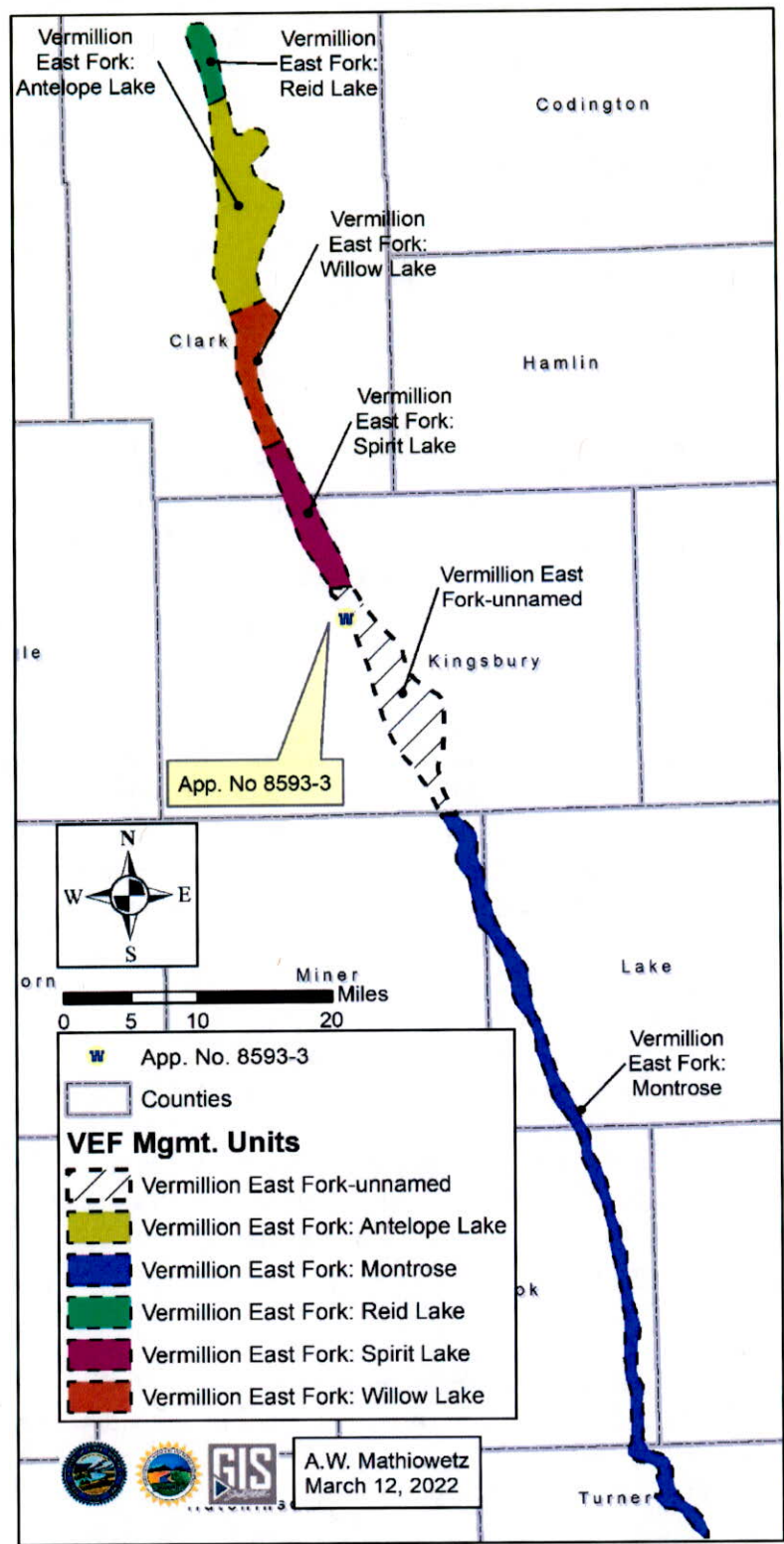


Figure 1- Map of Vermillion East Fork aquifer management units (modified from: Hansen, 2020) and Application No. 8593-3

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 Water Rights Program maintains 8 observation wells completed into the Vermillion East fork aquifer (Water Rights, 2022c). Figures 2 and 3 show the hydrographs for the two closest observation wells to the applicant's proposed well location, KG-88C located approximately 0.3 miles southwest and KG-88B located approximately 0.5 miles northwest (Water Rights, 2022c). The hydrographs for KG-88C and KG-88B are representative of the hydrographs for the other observation wells completed into the aquifer and are representative of the aquifer.

The hydrographs show generally stable water levels in the aquifer over their respective periods of record. The hydrographs document the aquifer responds well to climatic conditions with rising water levels during wetter periods and declining to stable levels during drier periods. Furthermore, the water levels of the aquifer readily recover between irrigation pumping seasons. The water level responding to climatic conditions and recovery between irrigation seasons is indicative that climatic conditions and, therefore, recharge to and natural discharge from the aquifer govern the long term fluctuations in water levels in the aquifer instead of pumping. By recognizing both recharge to and natural discharge from an aquifer can be captured for pumping, the observation well hydrographs document there is a reasonable probability of unappropriated water being available for this proposed appropriation.

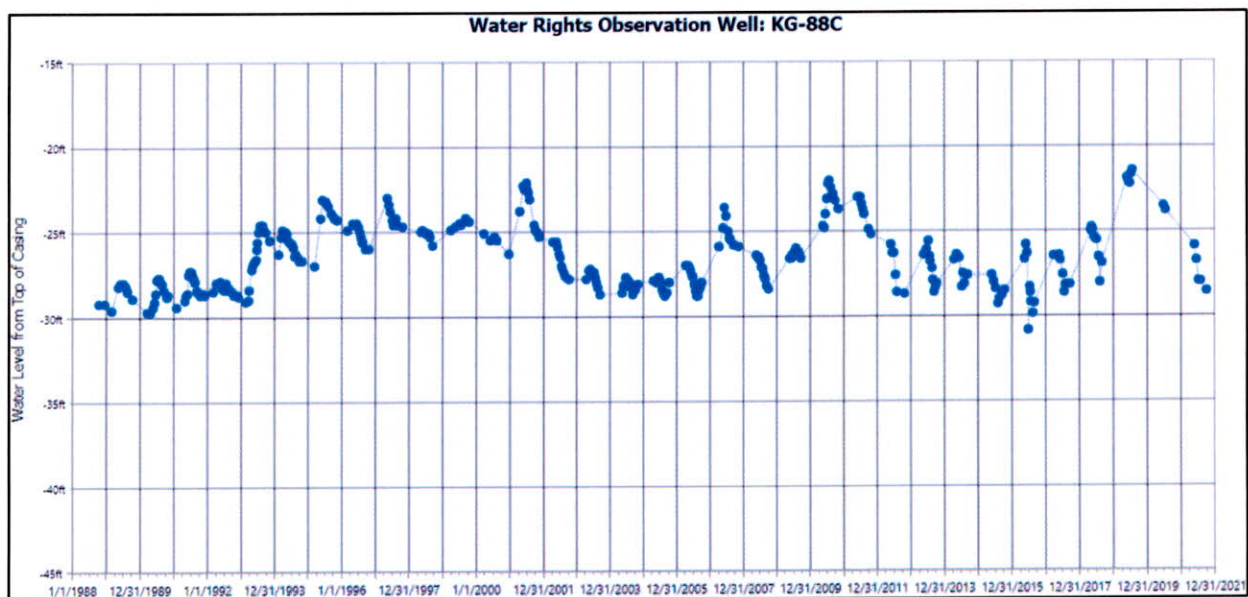


Figure 2- Hydrograph for observation well KG-88C (Water Rights, 2022c)

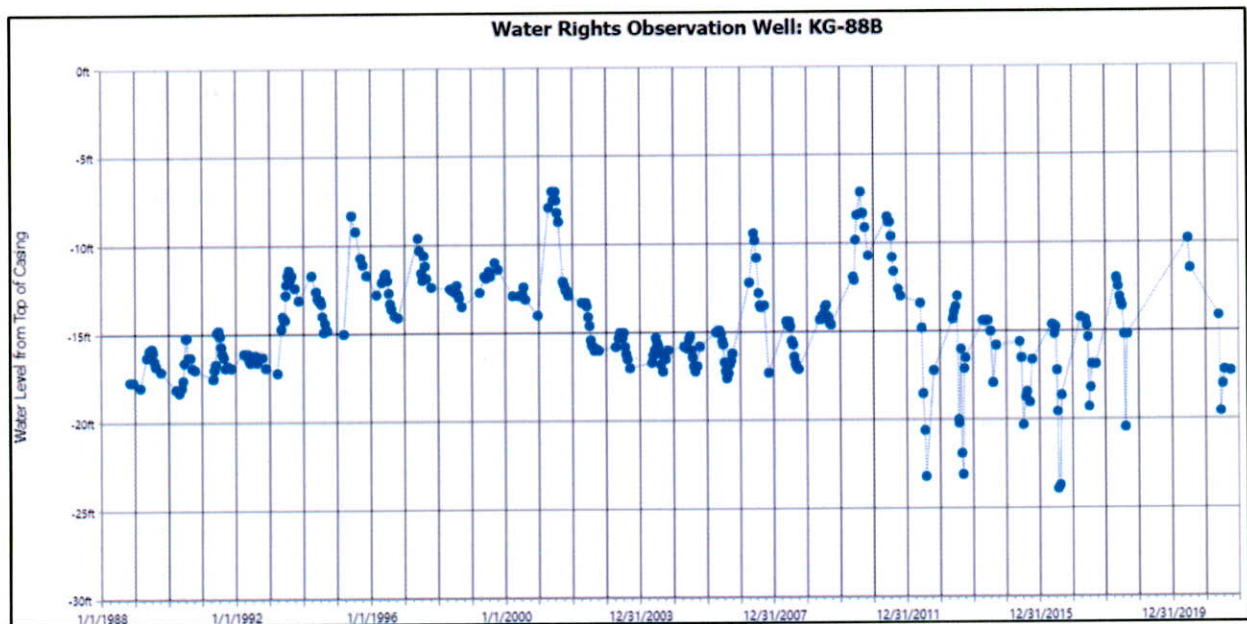


Figure 3- Hydrograph for observation well KG-88B (Water Rights, 2022c)

Hydrologic Budget

Recharge

Recharge is from precipitation where the aquifer is at or near land surface, aquifer interflow from hydrologically connected aquifers, and from local hydrologically connected surface water bodies (Hamilton, 1989). Hansen (2020) describes in detail the history of estimating recharge to the Vermillion East Fork aquifer. In short, a 4.0 inches per year rate for the nearby Spirit Lake management unit from Hedges and others (1985) has been used and applied to the approximate areal extent of 42,500 acres for a total of 14,167 ac-ft/yr.

Discharge:

Discharge occurs through outflow to hydrologically connected aquifers and surface water bodies, evapotranspiration, and well withdrawals (Hamilton, 1989; Water Rights, 2022d and 2022e). Currently, there are 27 water rights/permits appropriating water and 2 future use permits reserving water (Water Rights, 2022d). The non-irrigation permits, including the future use permits, are shown in Table 1 including estimates for average annual use. For non-irrigation permits limited only by diversion rate, average annual use is estimated by assuming pumping 60 percent of the time at their respective permitted diversion rates. Water rights limited by annual volume and future use permits are assumed to be fully developable to their respective annual volume limitation. Estimated average annual non-irrigation use from the Vermillion East Fork aquifer is 4,958.7 ac-ft/yr.

There are domestic wells completed into the Vermillion East Fork aquifer (Water Rights, 2022e). However, the availability of rural water systems and the limited withdrawal allowed by domestic wells significantly limits total withdrawals from domestic wells. When those factors are considered, withdrawals by domestic wells is a negligible portion of the hydrologic budget for the aquifer.

Table 1- Non-irrigation Vermillion East Fork aquifer water rights and future use permits (Water Rights, 2022d)

Permit No.	Name	Priority Date	Status	Use	CFS	Acres	Est. Non-Irr Use
1652-3	CITY OF DESMET	12/24/1968	LC	MUN	2.22	n/a	964.9
4795-3	CITY OF DESMET	01/01/1922	LC	MUN	2.11	n/a	917.1
6759-3	CITY OF DESMET	09/27/2006	LC	MUN	0.004	n/a	1.7
4137-3	KINGBROOK RWS INC	03/04/1977	LC	RWS	1.06	n/a	1,350*
5186-3	KINGBROOK RWS INC	03/29/1988	LC	RWS	0.7	n/a	
524-3	CITY OF DESMET	03/09/1958	FU	MUN	n/a	n/a	625**
5209-3	KINGBROOK RWS INC	08/15/1988	FU	RWS	n/a	n/a	1,100**
LC= Water Right, FU= Future Use Permit, MUN= Municipal					Total		4,958.7
RWS= Rural Water System, *= Combined annual volume limitation, **= Annual volume limitation							

Table 2 shows the reported irrigation pumpage from the Vermillion East Fork aquifer. The average annual irrigation pumpage over the period of record is 920 ac-ft/yr.

Table 2- Historic irrigation pumpage from the Vermillion East Fork aquifer (Water Rights, 2022b)

Year	No. Permits Reporting	Annual Pumpage (ac-ft)	Year	No. Permits Reporting	Annual Pumpage (ac-ft)
1979	23	1553.36	2002	16	985.08
1980	23	1531.92	2003	16	1141.42
1981	23	982.46	2004	15	839.32
1982	22	393.15	2005	15	966.6
1983	22	710.13	2006	15	1090.45
1984	21	694.0	2007	14	1178.74
1985	20	865.0	2008	14	1253.0
1986	21	485.0	2009	14	464.11
1987	21	661.0	2010	14	277.89
1988	21	973.0	2011	14	517.48
1989	22	1147.6	2012	16	1644.78
1990	22	1969.0	2013	17	1603.63
1991	22	877.0	2014	19	1229.64
1992	17	619.6	2015	21	1478.1
1993	17	146.2	2016	21	1586.45
1994	16	439.12	2017	22	1337.29
1995	16	253.59	2018	21	1114.86
1996	16	835.64	2019	21	28.0
1997	16	802.0	2020	22	685.0
1998	16	850.36	Min.	14	28.0
1999	16	588.69	Max.	23	1969.0
2000	16	950.39	Avg.	18.4	920.0
2001	16	891.71			

Balance of Hydrologic Budget

Estimated average annual recharge to the Vermillion East Fork aquifer is 14,167 ac-ft/yr. Estimated average annual withdrawals is 5,878.7 ac-ft/yr. Therefore, there is a reasonable probability unappropriated water is available for this proposed appropriation. The hydrologic budget agrees with the observation well data.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

The Vermillion East Fork aquifer is primarily under unconfined conditions but can be locally confined. In unconfined conditions, drawdown from a pumping well does not extend a significant distance from the production well. The nearest appropriative wells completed into the Vermillion East Fork aquifer to the applicant's proposed well site are one-half mile west and one-half mile north of the proposed well site (Water Rights, 2022d). The nearest domestic well on file with the Water Rights Program and completed into the Vermillion East Fork aquifer is located within the same quarter-section as the applicant's proposed well site (Water Rights, 2022d). There may be other domestic wells not on file with the Water Rights Program near the applicant's proposed well site.

Observation well KG-88B is located within approximately one-half mile of five high capacity wells, wells with a diversion rate greater than 0.2 cfs). As the hydrograph for KG-88B shows, see Figure 3, there is some drawdown created from nearby pumping. However, KG-88B is one of the few confined wells completed into the Vermillion East Fork aquifer. The top of the aquifer is 65 feet below the top of the well casing. That means there is at least 40 feet of artesian head pressure above the top of the aquifer. Furthermore, KG-88C is one-half mile southeast of KG-88B and is within approximately one mile of the same five high-capacity wells as KG-88B and its hydrographs shows minimal effects from the pumping.

In general, drawdown does not extend far from a pumping well completed into an unconfined aquifer but can extend some distance from a well completed into a confined aquifer. The applicant's proposed well site appears to be under unconfined conditions but is in close proximity to areas of the aquifer that are under confined conditions. South Dakota Codified Law (SDCL) 46-6-6.1 does not necessarily protect artesian head pressure as a means of delivery, and the Water Management Board has recognized in the past to place water to maximum beneficial use, a certain amount of drawdown may occur. In order to balance interests between appropriative use and delivery of water by artesian head pressure, the Water Management Board defined an "adversely impacted domestic well" in Administrative Rule of South Dakota (ARSD) 74:02:04:20(7) as:

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

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use of water issue for Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills (Water Rights, 1995). The Water Management Board adopted Findings of Facts and Conclusions of Law that noted reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, "general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable..." (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered an adverse impact it would also

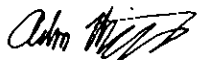
be in conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to lower their pumps to accommodate for deeper water levels where the aquifer is locally confined. There are no well interference complaints on file for the Vermillion East Fork aquifer in Kingsbury County (Water Rights, 2022a). Based on the information available, there is a reasonable probability this application can be developed without unlawfully impairing existing adequate appropriative user wells or domestic users with adequate wells.

SDCL 46-5-6:

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cfs for every 70 acres, or "the equivalent thereof." The statute does provide that: "The Water Management Board may allow a greater diversion, in volume or rate or both, if the method of irrigation, any time constraints on diversion of water, or the type of soil so requires...." Water Permit Application No. 8593-3 proposes to divert water at a maximum rate of 1.34 cfs for the irrigation of 80 acres or at a rate of 1.17 cfs per 70 acres. The applicant did not provide a reason for the request. This application intends to use a smaller sized center pivot. In general, center pivot irrigation systems require a certain amount of flow rate to operate properly, and this flow rate is usually designed around a full quarter section pivot (approximately 136 acres). The request by the applicant is reasonable and acceptable to the Water Rights Program.

CONCLUSIONS:

1. Application No. 8593-3 proposes irrigating 80 acres at a maximum instantaneous diversion rate of 1.34 cfs from a well completed into the Vermillion East Fork aquifer in Kingsbury County.
2. Based on the observation well data and a hydrologic budget, there is a reasonable probability unappropriated water is available for this proposed appropriation.
3. There is a reasonable probability that pumping this proposed diversion will not unlawfully impair existing domestic water users and water rights with adequate wells.
4. Application No. 8593-3 has requested a diversion rate of 1.34 cfs which is in excess of the statutory limit which would be the equivalent of 1.17 cfs per 70 acres. The limited size of the center pivot still requires a higher flow rate to properly operate. This is an acceptable reason.



Adam Mathiowetz, PE
SD DANR-Water Rights Program

REFERENCES:

- Fahrenbach, M.D., Steece, F.V., Sawyer, J.F., McCormick, K.A., McGillivray, L.D., Schulz, I.D., and Redden, J.A. 2010. South Dakota Stratigraphic Correlation Chart. Oil and Gas Investigation 3. SD DANR-Geological Survey. Vermillion, South Dakota.
- Hamilton, L.J. 1989. Water Resources of Brookings and Kingsbury Counties, South Dakota. Water-Resources Investigations Report 88-4185. U.S. Geological Survey. Huron, South Dakota.

- Hansen, B.M. 2020. Report to the Chief Engineer on Water Permit Application No. 8418-3 De Smet School District c/o Abi Van Regenmorter. SD DANR-Water Rights Program. Pierre, SD.
- Hedges, L.S., Burch, S.L., Iles, D.I., Barari, R.A., and Schoon, R.A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota, and Iowa. Tasks 1-4. Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185. SD DANR-Geological Survey. Vermillion, South Dakota.
- Hedges, L.S., Allen, J.C., and Holly, D.F. 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. SD DANR-Geological Survey. Vermillion, South Dakota.
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- Water Rights. 2022a. County Files. SD DANR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2022b. Irrigation Questionnaire Files. SD DANR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2022c. Observation Well Files. SD DANR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2022d. Water Right/Permit Files. SD DANR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2022e. Well Completion Reports. SD DANR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 1995. Findings of Fact, Conclusions of Law, and Final Decision in the Matter of Water Permit Application No. 2313-2, Coca-Cola Bottling Company of the Black Hills. DANR-Water Rights Program file for Water Right No. 2313-2. Pierre, South Dakota.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, March 29, 2022 1:13 PM
To: Tom Pierce
Subject: Water Permit Application for Chad Dylla
Attachments: 3137.pdf

FYI

Attached is a copy of the report, chief engineer recommendation and information regarding the public notice for the water permit application for Chad Dylla.

This information is being mailed to Mr. Dylla today. He didn't put an email address on his application.

Karen Schlaak

DANR - Water Rights Program

(605) 773-3352

Website: <https://danr.sd.gov>



RECEIVED

APR 28 2022

Affidavit of Publication

WATER RIGHTS
PROGRAMSTATE OF SOUTH DAKOTA,
County of Kingsbury.

SS.

Ann Hesch of said county being first duly sworn on oath, says that he is the publisher of the KINGSBURY JOURNAL, a weekly newspaper printed and published in De Smet in said County of Kingsbury and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Notice of Application No 8593-3
To Appropriate Water

Chad Dylla, a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once in

each week for One successive weeks, on the day of each week on which said newspaper was regularly published, to-wit:

4-6 2022; _____ 20____
____ 20____; _____ 20____
____ 20____; _____ 20____
____ 20____; _____ 20____

that the full amount of the fee charged for the publication of said notice accrues to the benefit of the publisher of 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 person whomsoever, and that the fees charged for the publication thereof are

\$46.66

Ann Hesch

Subscribed and sworn to before me this 25th

day of April A.D. 2022

Don Churchill

Notary Public

Kingsbury County, South Dakota

My Commission Expires

October 30th, 2024

NOTICE OF APPLICATION NO. 8593-3
TO APPROPRIATE WATER

Notice is given that Chad Dylla, 20463 432nd Ave, De Smet SD 57231 has filed an application for a water permit to appropriate 1.34 cubic feet of water per second (cfs) from one well to be completed into the Vermillion East Fork Aquifer (approximately 66 feet deep) located in the SW 1/4 NW1/4 section 21 for irrigation of 80 acres located in the NW 1/4 section 21; all in T111N-R56W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately one mile northwest of De Smet SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8593-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352.

The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by April 18, 2022.

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

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by April 18, 2022.

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

Published once at the total approximate cost of \$46.66

October 30th 2024
Expires
My Commission

RECEIVED

APR 08 2022

Proof Of Publication

WATER RIGHTS
PROGRAM

Huron Plainsman
49 3rd Street SE
Huron, SD 57350
605-353-7402

Legal Notice Number: 1343

I, Mckenzie Castillo, being duly sworn on oath say that the Plainsman is a daily paper published at Huron, Beadle County South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-two consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am a Legal Advertising Coordinator of said newspaper and know that facts herein state. The annexed notice headed: Water Rights – Notice of Application #8593-3 was published for one day, in said newspaper and not in any supplement of the said newspaper; the publication was on - 4/6/2022. That the full amount of the fee charged for the publishing \$ 44.85 insures to the benefit of the publisher of 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 person whom so ever.

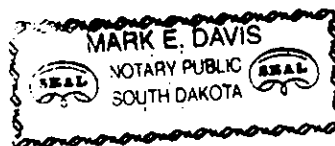
Mckenzie Castillo

Subscribed and sworn to me before this date 4-16-2022

[Signature]

Notary Public, South Dakota

My Term Expires 12/27/2024



F. P. 04-08-22

**NOTICE OF
APPLICATION
NO. 8593-3 to**

Appropriate Water

Notice is given that Chad Dylla, 20463 432nd Ave, De Smet SD 57231 has filed an application for a water permit to appropriate 1.34 cubic feet of water per second (cfs) from one well to be completed into the Vermillion East Fork Aquifer (approximately 66 feet deep) located in the SW 1/4 NW 1/4 section 21 for irrigation of 80 acres located in the NW 1/4 section 21; all in T11N-R56W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately one mile northwest of De Smet SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8593-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

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No. 1343 (adv.)

Published one time at the total approximate cost of \$44.85.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, March 29, 2022 1:00 PM
To: 'rcrandall@plainsman.com'
Subject: 8593-3, Chad Dylla
Attachments: 8593-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on April 6, 2022.

Chad Dylla, 20463 432nd Ave, DeSmet SD 57231 (605 860-8705) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

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



Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, March 29, 2022 1:02 PM
To: legals@kingsburyjournal.com
Subject: 8593-3, Chad Dylla
Attachments: 8593-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on April 6, 2022.

Chad Dylla, 20463 432nd Ave, DeSmet SD 57231 (605 860-8705) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

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





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

March 29, 2022

Chad Dylla
20463 432nd Ave
DeSmet SD 57231

Dear Mr. Dylla:

Water Permit Application No. 8593-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Kingsbury Journal printed at DeSmet (Ph # 605 854-3331) and the Plainsman printed at Huron (Ph # 605 353-7414). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8593-3 to Appropriate Water

Notice is given that Chad Dylla, 20463 432nd Ave, De Smet SD 57231 has filed an application for a water permit to appropriate 1.34 cubic feet of water per second (cfs) from one well to be completed into the Vermillion East Fork Aquifer (approximately 66 feet deep) located in the SW ¼ NW ¼ section 21 for irrigation of 80 acres located in the NW ¼ section 21; all in T111N-R56W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This site is located approximately one mile northwest of De Smet SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8593-3 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by April 18, 2022.

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Published once at the total approximate cost of_



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 01 2022

Chad Dylla
20463 432nd Ave
DeSmet SD 57231

Dear Mr. Dylla:

Enclosed is Water Permit No. 8593-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

11- 02

Date:

CHAD DYLLA SEC 21 DE SMET

Legend



CHAD DYLLA 66' 12" IRR WELL OCT 2022



TH # 1 75'



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8593-3

I have this day, August 12, 2024, made a thorough examination of the water use system constructed by Chad Dylla, 20463 432nd Ave, DeSmet, SD 57231 of Permit No. 8593-3, bearing the priority of February 11, 2022 authorizing the diversion of 1.34 cu. ft. per second of the waters of the Vermillion East Fork Aquifer for irrigation purposes, in Kingsbury County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: THEIN WELL CO
- 2) No. of Wells 1
- 3) Depth(s) 66 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 12 inches
- 2) Length 46 feet
- 3) Type PLASTIC

Screen:

- 1) Type STAINLESS STEEL
- 2) Length 20 feet
- 3) Static water level 13 feet

Pump:

- 1) Make Submersible
- 2) Model Unknown
- 3) Size Unknown
- 4) Capacity 600 GPM

Motor:

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

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

- 1) Type Buried PVC
- 2) Size 8 inches
- 3) Length 50 feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 950 feet
- 3) Number of towers 5
- 4) End gun Y
- 5) Capacity 600 GPM

Chemigation Equipment:

- 1) Does chemigate N

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y
- 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: WELL LOCATION
From the NW corner Sec 21 T111N R56W, 1590 ft S & 1010 ft E, Lat 44.40783 Long -97.56812 (SW
1/4 NW 1/4).
2. The works are capable of diverting and conveying to the place of use 1.34 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:
legal description/acreage
IRRIGATED AREA
All in Sec 21 T111N R56W
NW 1/4 NW 1/4 - 19 acres
NE 1/4 NW 1/4 - 9 acres
SE 1/4 NW 1/4 - 18 acres
SW 1/4 NW 1/4 - 34 acres
comprising a total of 80 acres of land and the license should be issued for 1.34 cfs
3. All structures, wells and lands on map Y

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

FSA maps and the ArcGIS program were used to construct the attached well location and estimated irrigated area map.

System flow rate was reported in Irrigation Questionnaire.

I talked to Mr. Chad Dylla on the phone regarding the field visit.

The address and phone number in the permit application materials are current.



Darrell DeBoer
Water Rights Inspector
DENR, Water Rights Program

Date report completed: August 13, 2024



0 400 800 1,600 2,400 3,200 Feet

Darrell DeBoer
 Water Right Inspector
 DANR-Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 09 2024

8593-3

Chad Dylla
20463 432nd Ave
DeSmet SD 57231

Dear Mr. Dylla:

Enclosed is Water License No. 8593-3. 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.

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8593-3

(1) Chad Dylla, 20463 432nd Ave, DeSmet SD 57231, made Application No. 8593-3, February 11, 2024, for a water permit to divert 1.34 cubic feet of water per second from groundwater, one well (Vermillion East Fork Aquifer), Kingsbury County, South Dakota for irrigation purposes. Permit No. 8593-3, with a priority date of February 11, 2022, was approved April 18, 2022, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before April 18, 2027, and for the application to beneficial use of water on or before April 18, 2031.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.34 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,590 ft S & 1,010 ft E of the NW corner Section 21, T111N, R56W (SW $\frac{1}{4}$ NW $\frac{1}{4}$)
(Latitude 44.40783 & Longitude -97.56812)

(3) The amount of 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.

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

Section 21, T111N, R56W			
NE $\frac{1}{4}$ NW $\frac{1}{4}$	9 acres	SW $\frac{1}{4}$ NW $\frac{1}{4}$	34 acres
NW $\frac{1}{4}$ NW $\frac{1}{4}$	19 acres	SE $\frac{1}{4}$ NW $\frac{1}{4}$	18 acres
TOTAL: 80 acres			

(5) Pursuant to South Dakota Water Law 46-5-30.1 Chad Dylla, the holder and/or owner of Water Right No. 8593-3 is issued a license to appropriate water, the right to use 1.34 cubic feet of water per second from groundwater, one well (Vermillion East Fork Aquifer), with a priority date of February 11, 2022, from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8593-3 and subject to the following qualifications:

1. The well approved under Water Permit No. 8593-3 is located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8593-3 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. *(The well was drilled in 2022 by Thin Well Company Inc. A copy of the well completion report is on file with the Water Rights Program.)*

continued

3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8593-3 authorizes a maximum diversion rate of 1.34 cfs for the irrigation of 80 acres with an annual volume not to exceed 2 acre-feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Eric Gronlund

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

SEP 09 2024

date

