

WATER PERMIT NO. 8637-3

Name of Applicant: Wilde Air Service LLC

Address: 21009 459th Ave, Volga S 57071

Phone: 605 860-8692

Amount of Water Claimed: 0.056 cfs

Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: commercial

County: Brookings

Type of Waste Disposal System:

Location: 3 miles north of Volga

PRIORITY

Date Received: 6-6-22

Application/License Fee: \$ 300 (needs refund)

Corrected Application Received:

Period of Annual Use: May 1 – November 30

Remarks:

Diversion Point: NE 1/4 SE 1/4 Sec 9-T111N-
R56W

Land to be Irrigated: NA

Depth of Well: 50 feet deep

Well Driller:

Remarks:

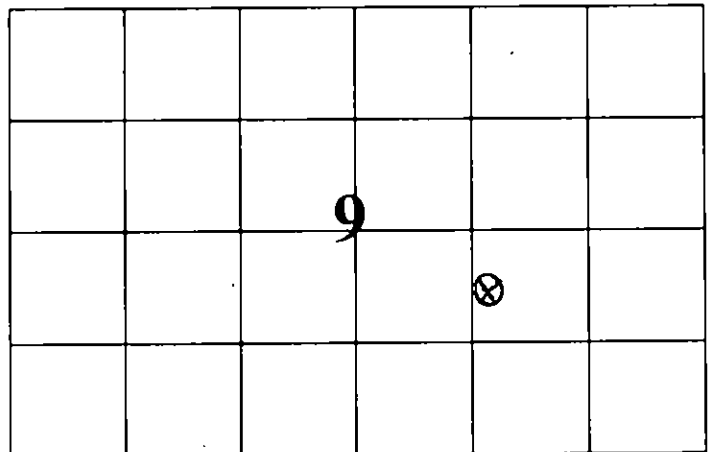
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 6-6-22

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



**SOUTH DAKOTA
WATER PERMIT NO. 8637-3**

Date of first receipt of application June 6, 2022.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8637-3 to Wilde Air Service LLC, c/o Isaac Wilde, 21009 459th Ave, Volga SD 57071 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. 8637-3 appropriates an amount not exceeding 0.10 acre-feet of water annually at a maximum pump rate of 0.056 cubic feet of water per second from one well to be completed into the Vermillion-East Fork Aquifer (50 feet deep) located in the NE 1/4 SE 1/4 Section 9-T111N-R56W for commercial use in an ag acrial spraying operation. This site is located approximately 3 miles north of DeSmet SD.
2. The water appropriated shall be used for the purpose of commercial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: May 1 – November 30.
4. The date of approval of Permit No. 8637-3 is August 15, 2022.
5. The date from which applicant may claim right is June 6, 2022.
6. One-fifth of the construction is to be completed on or before February 15, 2025.
7. All construction is to be completed on or before August 15, 2027.
8. Water is to be put to beneficial use on or before August 15, 2031.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

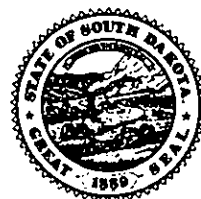
QUALIFICATIONS

1. The well approved under Water Permit No. 8637-3 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. 8637-3 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. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Vermillion East Fork aquifer.
4. Water Permit No. 8637-3 authorizes a total annual diversion of 0.10 acre feet of water.

WATER MANAGEMENT BOARD

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

SEP 13 2022
date



JUN 06 2022

PAID

JUN 6 2022

Ck# 1355

Rec't#

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8637-3</u> (office use only) Hydrologic Unit <u>10170202</u> Basin <u>Sioux River</u> Newspaper <u>Kingsbury Journal</u> <u>Brookings Register</u>
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Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Water Distribution System	☐ Recreational	☐ Institutional
☐ Rural Water System	☒ Commercial	☐ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other	

Type of Application: (check one)

☒ New	☐ Vested Right (Use predates Mar 2, 1955)	☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____		
☐ Amendment/Correction to Permit No. _____		

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

1. Name to Appear on Water Permit Wilde Air Service LLC
Mailing Address 21009 459th Ave Volga SD 57071
(Address) (City) (State) (Zip Code)

Phone _____ Mobile 605-860-8692 Email Wildeairservice@gmail.com

2. Amount of water claimed 0.056 *CFS or 25 **GPM and 20,000 ***AF or Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***) Acre Feet - storage capacity of dam/dugout or annual use)

3. Source of water supply Aquifer (Desmet Airport) (NE 1/4 SE 1/4) Kingsbury

4. Location of point of diversion 1 Well - Middle section 9-111N-R56W County Brookings
(example: 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ No

If "Yes," where will water be used? _____
(example: NW 1/4 section 12-T104N-R53W)

5. County or counties where water will be used Kingsbury

6. Annual period during which water is to be used May - November 30

7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Drilling Well for Ag Aerial spraying operations. Will use Water-Air
gap separation to fill tanks. Well will be around 30-50 feet deep.
Drilling will be done by stretches well drilling.

I, Isaac Wilde Managing member, the applicant, certify under
Name of Person Title (if applicable)

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

Supplemental Information

(type or print)

1. Well Information

(check one or both as applicable) ☒ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by _____

For either Existing or Proposed Wells:

c) Well Depth (required) 50 Depth to Top of Water Bearing Material 20 Depth to Water from Surface 20

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)

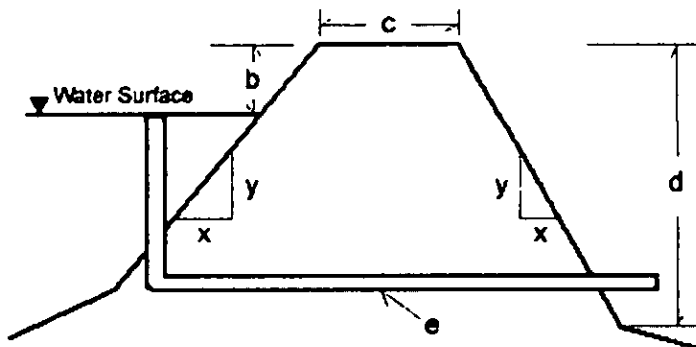
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





Coordinates
44.43248
-97.55595

111N
56W
S-9



111N 56W
Section: 05

111N 56W
Section: 04

111N 56W
Section:

111N 56W
Section: 08

111N 56W
Section: 09

111N 56W
Section:

111N 56W
Section: 17

111N 56W
Section: 16

111N 56W
Section:



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

File No. 8637-3

WATER RIGHTS PROGRAM -- FILE DOCUMENTATION

NAME: Wilde Air Service LLC, c/o Isaac Wilde

ADDRESS: 21009 459th Ave, Volga SD

DATE: June 28, 2022 **PHONE:** 605.860.8692

RE: Property Ownership of Well Site

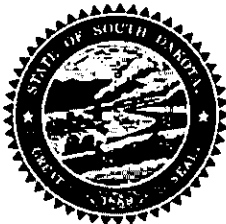
COMMENTS:

Isaac Wilde returned by call concerning ownership of the property where the proposed well will be located provided Application No. 8637-3 is approved. Mr. Wilde indicated the property is owned by the City of De Smet. I asked Mr. Wilde if the city was aware of his application for a water permit. Mr. Wilde indicated that the city was aware and directed him to acquire a permit from the state prior to seeking approval from the city council.

RECOMMENDED ACTION:

Proceed with processing of the application in the name of Wilde Air Service LLC.

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



OFFICE OF THE SECRETARY OF STATE
STEVEN J. BARNETT, SECRETARY OF STATE
JASON LUTZ, DEPUTY SECRETARY OF STATE

Filing Information

Name: **Wilde Air Service LLC**

General Information

SOS Business ID **DL048862**
Filing Type: Limited Liability Company - Domestic
06/13/2016
Delayed Effective Date: 06/13/2016 10:27 AM
Status: Good Standing
Duration Term: Perpetual
Managed By: Member-Managed

Registered Agent Address

Isaac James Wilde
21009 459TH AVE
VOLGA, SD 57071

Principal Address

21009 459TH AVE
VOLGA, SD 57071

The following document(s) was/were filed in this office on the date(s) indicated below:

Date Filed	Filing Description	Image #
05/05/2022	2022 Annual Report	B0220-2032
04/05/2021	2021 Annual Report	B0175-6607
04/02/2020	2020 Annual Report	B0134-6209
04/17/2019	2019 Annual Report	B0096-3194
04/02/2018	2018 Annual Report	B0057-4111
05/23/2017	2017 Annual Report	B0031-6687
06/13/2016	Initial Filing (Delayed Date 06/13/2016)	DL048862

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date June 6, 2022

RECEIVED OF Wilde Air Service LLC 21009 459th Ave., Volga SD 57071

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

Fee for Application for Permit No. <u>8637-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>500.00</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>8637-3</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>700.00</u>

By Eric Gronlund
Chief Engineer

me



**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. 8637-3, Wilde Air Service LLC**

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. 8637-3, Wilde Air Service LLC, 21009 459th Avenue, Volga SD 57071.

The Chief Engineer is recommending APPROVAL of Application No. 8637-3 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. 8637-3 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. 8637-3 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. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Vermillion East Fork aquifer.
4. Water Permit No. 8637-3 authorizes a total annual diversion of 0.10 acre feet of water.

See report on application for additional information.

Eric Gronlund, Chief Engineer
July 26, 2022

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8637-3
WILDE AIR SERVICE LLC
C/O ISAAC WILDE
JULY 28, 2022

Water Permit Application No. 8637-3 proposes to appropriate an amount not to exceed 0.10 acre-feet of water annually (ac-ft/yr) at a maximum instantaneous diversion rate of 0.056 cubic feet of water per second (cfs) (25 gallons per minute) from one well to be completed into the Vermillion East Fork aquifer for commercial use in an ag aerial spraying operation. The proposed well is expected to be approximately 50 feet deep and is to be located in the NE ¼ SE ¼ Sec. 9-T111N-R56W. This site is located approximately 3 miles north of De Smet, SD

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). No test hole or well completion report was submitted with the application. The well for Water Right No. 6759-3 held by the City of De Smet, located approximately 360 feet northwest of the proposed well site and completed into the same aquifer the applicant intends to use, encountered “yellow sand...” from 3 to 16 feet below ground surface and had a static water level of 6 feet below grade at the time of well completion in September 2006. Within approximately one-half mile west of the proposed well site, aquifer materials comprising the Vermillion East Fork aquifer, primarily sand colored both yellow and grey and some gravel, were encountered from 8 to up to 33 feet below grade with static water levels around 5 feet below grade in November 1971. These depths and material descriptions are consistent with the Vermillion East Fork aquifer. Therefore, the Vermillion East Fork aquifer is unconfined in the area of the proposed well site.

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.

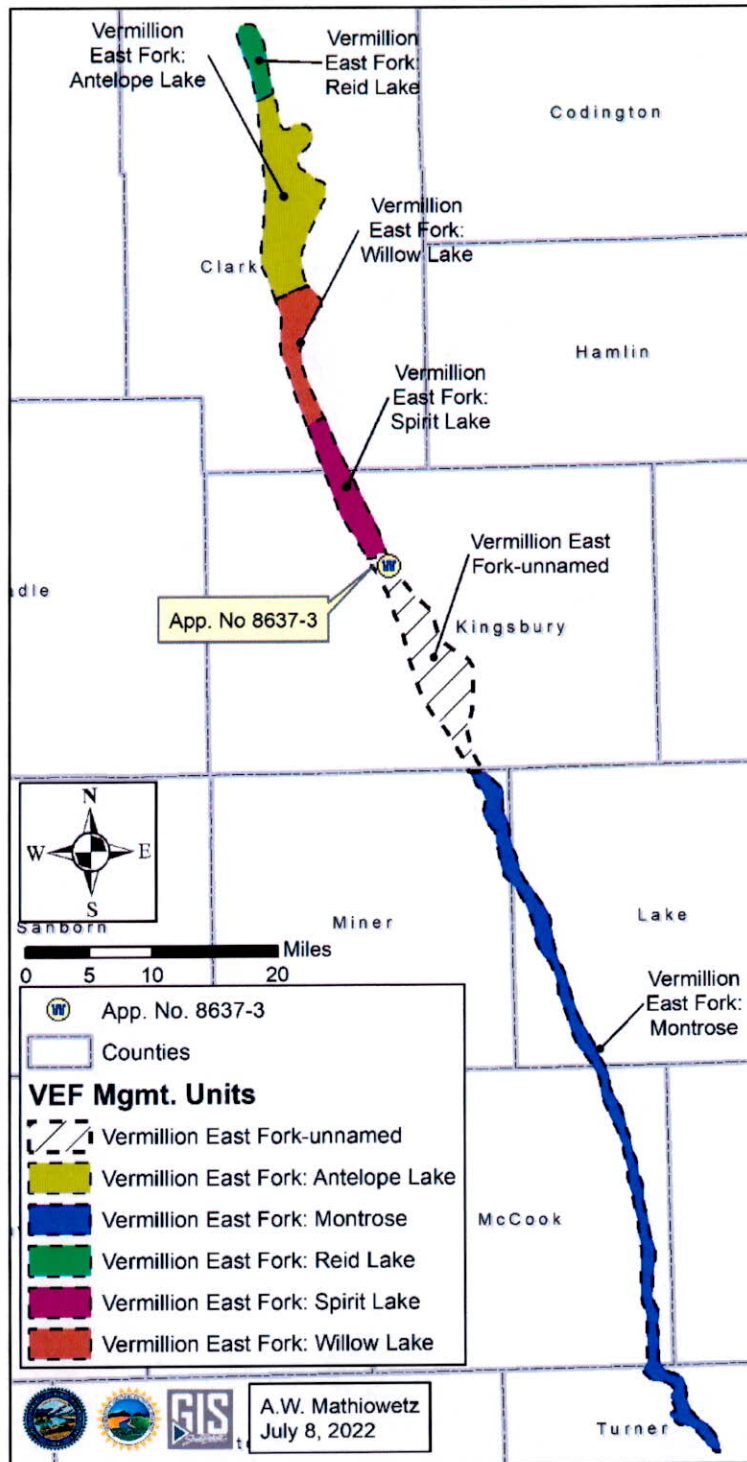


Figure 1- Map of Vermillion East Fork aquifer management units (modified from: Hansen, 2020) and Application No. 8637-3

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.

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 through 6 show the hydrographs for the five Vermillion East Fork observation wells located within approximately two miles of the applicant's proposed well site. The hydrographs 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.

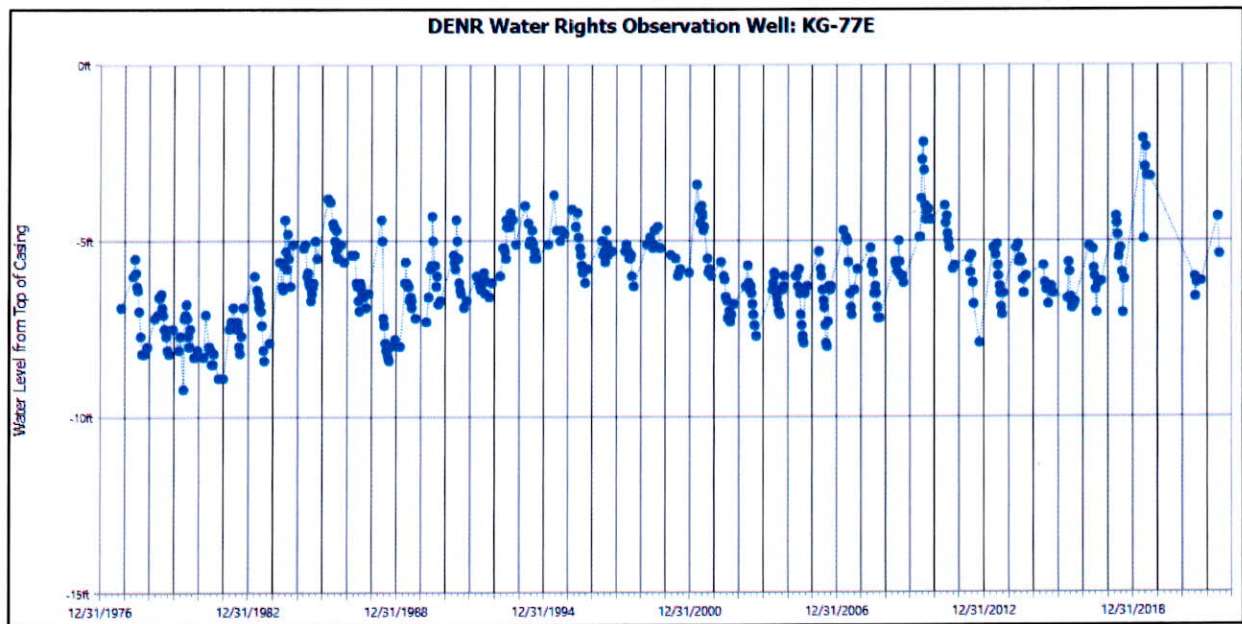


Figure 2- Hydrograph for observation well KG-77E approximately 1.5 miles south of the proposed well site (Water Rights, 2022c)

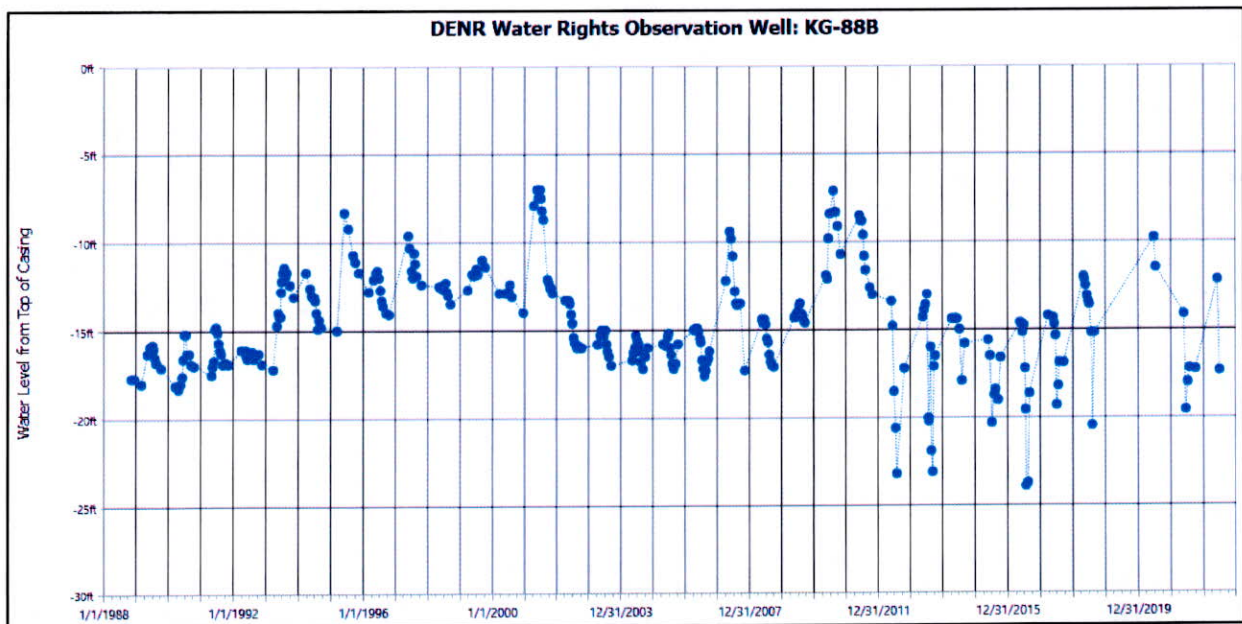


Figure 3- Hydrograph for observation well KG-88B approximately 1.8 miles southwest of the proposed well site (Water Rights, 2022c)

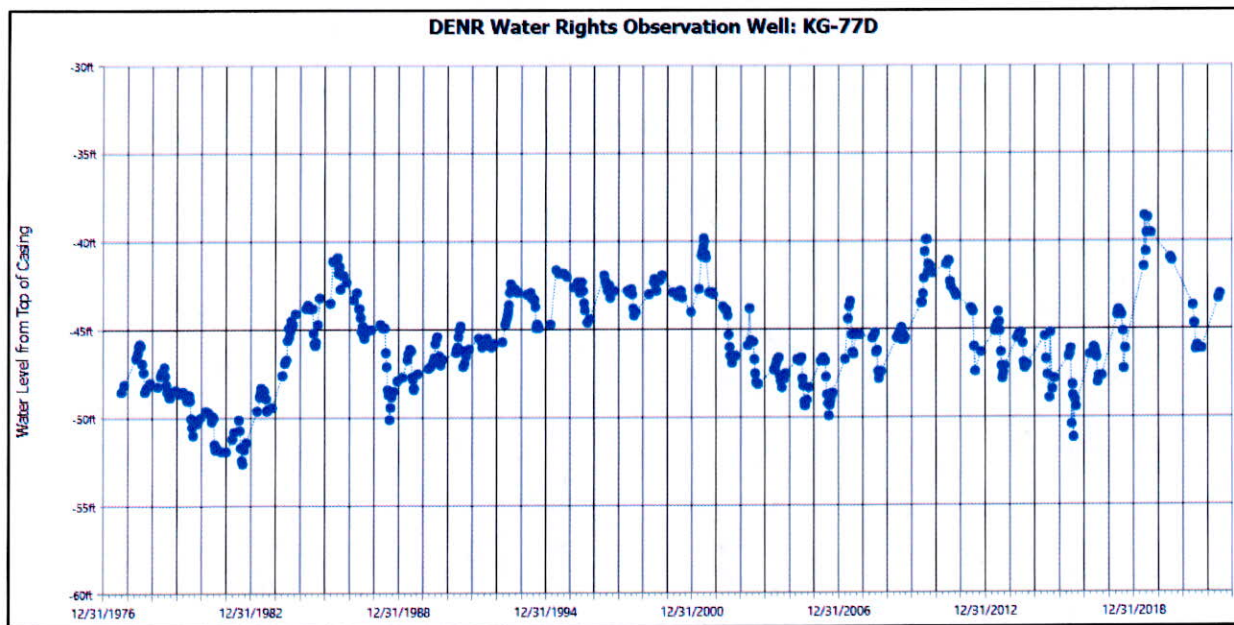


Figure 4- Hydrograph for observation well KG-77D approximately 1.9 miles west-southwest of the proposed well site (Water Rights, 2022c)

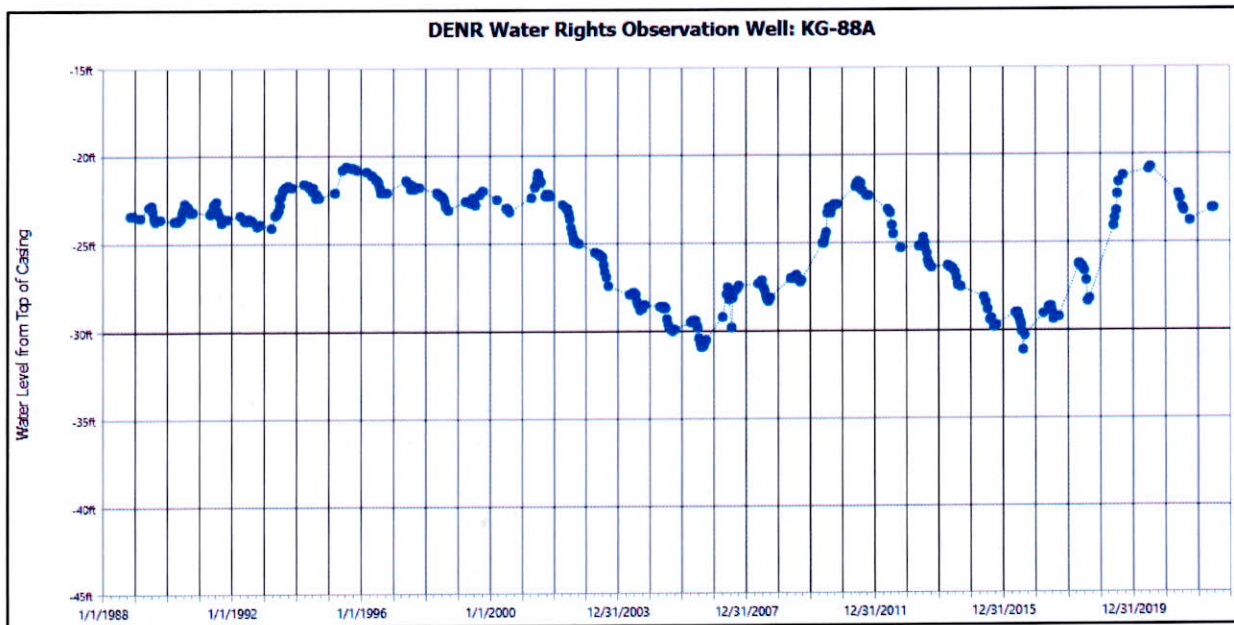


Figure 5- Hydrograph for observation well KG-88A approximately 2 miles northwest of the proposed well site (Water Rights, 2022c)

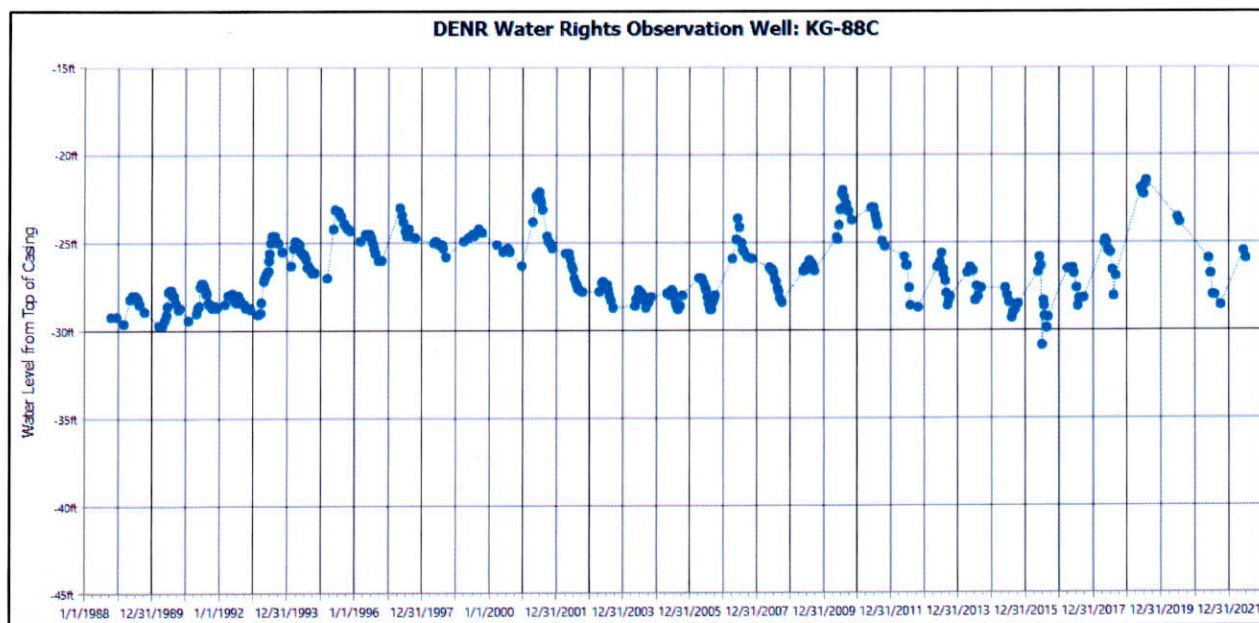


Figure 6- Hydrograph for observation well KG-88C approximately 2 miles southwest of the proposed well site (Water Rights, 2022c)

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 26 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 small withdrawals by domestic means 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 939.2 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	2007	14	1178.74
1985	20	865	2008	14	1253
1986	21	485	2009	14	464.11
1987	21	661	2010	14	277.89
1988	21	973	2011	14	517.48
1989	22	1147.6	2012	16	1644.78
1990	22	1969	2013	17	1603.63
1991	22	877	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
1997	16	802	2020	22	685
1998	16	850.36	2021	20	1742.73
1999	16	588.69	Min.	14	28
2000	16	950.39	Max.	23	1969
2001	16	891.71	Avg.	18.4	939.2

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 5,897.9 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 well, authorized by Water Right No. 6759-3 for the City of De Smet, completed into the Vermillion East Fork aquifer is approximately 360 feet northwest of the proposed well site (Water Rights, 2022d). There are two other appropriative wells completed within approximately one mile of the proposed well site (Water Rights, 2022d). The nearest corner of the future use area authorized by Future Use Permit No. 5209-3 is located approximately 1,260 feet southeast of the proposed well site (Water Rights, 2022d). The nearest domestic wells on file with the Water Rights Program and completed into the Vermillion East Fork aquifer are located within approximately one-quarter mile of 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 hydrograph 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 SDCI 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 limited diversion rate and annual appropriation proposed by this application, the unconfined nature of the aquifer in the area of this application, the distance between the applicant's proposed well site and most other wells, and the lack of well interference complaint history, there is a reasonable probability this application can be developed without unlawfully impairing existing adequate appropriative user wells or domestic users with adequate wells.

CONCLUSIONS:

1. Application No. 8637-3 proposes to appropriate an amount not exceeding 0.10 ac-ft/yr from one well at a maximum instantaneous diversion rate of 0.056 cfs (25 gallons per minute) 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.



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, L.D., and Redden, J.A. 2010. South Dakota Stratigraphic Correlation Chart. Oil and Gas Investigation 3. SD DANR-Geological Survey. Vermillion, South Dakota.
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- Hedges, L.S., Burch, S.L., Iles, D.L., 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.
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Stonesifer, J.R. 2013. Report to the Chief Engineer on Water Permit Application No. 7855-3 William Poppen. SD DANR-Water Rights Program. Pierre, south Dakota.

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: Thursday, July 28, 2022 10:34 AM
To: 'wildeairservice@gmail.com'
Subject: Water Permit Application No. 8637-3
Attachments: 3779.pdf

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

Karen Schlaak

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



Affidavit of Publication

RECEIVED

AUG 19 2022

STATE OF SOUTH DAKOTA,
County of Kingsbury.

SS.

OFFICE OF
WATER

WILDE AIR SERVICE NOTICE OF APPLICATION NO. 8637-3 TO APPROPRIATE WATER

Ann Wesch 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

Wilde Air Service. Notice of Application No. 8637-3 to Appropriate Water, 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:

8-3 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

\$ 48.73

Ampheson

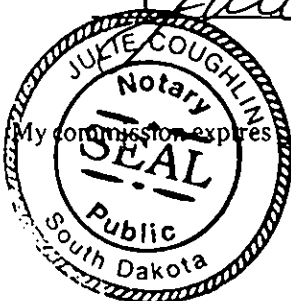
Subscribed and sworn to before me this 17th

day of August A.D. 2022

Julie Coughlin

Notary Public

Kingsbury County, South Dakota



My Commission Expires
October 30th, 2024

Notice is given that Wilde Air Service LLC, c/o Isaac Wilde, 21009 459th Ave, Volga SD 57071 has filed an application for a water permit to appropriate an amount not exceeding 0.10 acre-feet of water annually at a maximum pump rate of 0.056 cubic feet of water per second from one well to be completed into the Vermillion:East Fork Aquifer (50 feet deep) located in the NE 1/4 SE 1/4 Section 9-T111N-R56W for commercial use in an aerial spraying operation. This site is located approximately 3 miles north of DeSmet SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8637-3 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 August 15, 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 August 15, 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 \$48.73 and can be viewed free of charge at www.sd-publicnotices.com

Affidavit of Publication

State of South Dakota

ss

County of Brookings

Katherine Foiles of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

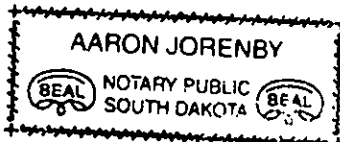
LEG#19705 Wilde Air Service

same was published, is hereto attached marked Exhibit said newspaper for _____ 1 times, to-wit:

August 3, 2022

said Exhibit "A" inures to the sole benefit for the publishers 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; that the fees charged for the publication thereof are:

Forty-Eight Dollars and Sixty-One Cents \$48.61



August

12 day of
2022

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires February 22, 2026

RECEIVED

AUG 18 2022

OFFICE OF
WATER

Legal 19705 1X
8/3

NOTICE OF
APPLICATION
NO. 8637-3 TO

APPROPRIATE WATER

Notice is given that Wilde Air Service LLC, c/o Isaac Wilde, 21009 459th Ave, Volga SD 57071 has filed an application for a water permit to appropriate an amount not exceeding 0.10 acre-feet of water annually at a maximum pump rate of 0.056 cubic feet of water per second from one well to be completed into the Vermillion-East Fork Aquifer (50 feet deep) located in the NE 1/4 SE 1/4 Section 9-T111N-R56W for commercial use in an aerial spraying operation. This site is located approximately 3 miles north of DeSmet SD. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8637-3 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 August 15, 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 August 15, 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 August 3, 2022 at the total approximate cost of \$48.61 and may be viewed free of charge at www.sdpublicnotices.com.

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, July 28, 2022 9:32 AM
To: registerclassifieds@brookingsregister.com
Subject: 8637-3,Wilde Air Service
Attachments: 8637-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on August 3, 2022.

Wilde Air Service LLC, c/o Isaac Wilde, 21009 459th Ave, Volga SD 57071 (605 860-8692) 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.**

July 28, 2022

Wilde Air Service LLC
c/o Isaac Wilde
21009 459th Ave
Volga SD 57071

Dear Mr. Wilde:

Water Permit Application No. 8637-3 for commercial 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 Brookings Register printed at Brookings (Ph # 605 692-6271). 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. 8637-3 to Appropriate Water

Notice is given that Wilde Air Service LLC, c/o Isaac Wilde, 21009 459th Ave, Volga SD 57071 has filed an application for a water permit to appropriate an amount not exceeding 0.10 acre-feet of water annually at a maximum pump rate of 0.056 cubic feet of water per second from one well to be completed into the Vermillion:East Fork Aquifer (50 feet deep) located in the NE 1/4 SE 1/4 Section 9-T111N-R56W for commercial use in an ag aerial spraying operation. This site is located approximately 3 miles north of DeSmet SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8637-3 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 August 15, 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 August 15, 2022.

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Published once at the total approximate cost of_

September 13, 2022

PAYMENT REQUEST FORM

PAYEE: Wilde Air Service LLC
c/o Isaac Wilde
21009 459th Ave
Volga SD 57071

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

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Over payment of Application/License Fee

AMOUNT: \$400.00

FUNDING SOURCE: WR General

GENERAL:

FEDERAL:

OTHER:

COMMENTS:

AUTHORIZATION: *Eric Brunkard* 9/13/2022

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct.
I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued
thereunder relating to nondiscrimination in federal assisted programs.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 13 2022

Wilde Air Service LLC
c/o Isaac Wilde
21009 459th Ave
Volga SD 57071

Dear Mr. Wilde:

Enclosed is Water Permit No. 8637-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

An application filing fee of \$700.00 was submitted with the application. The correct fee for this permit is \$300.00. \$400.00 will be refunded to you. The refund check should be received within the next couple of weeks.

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

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

Sincerely,

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

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

**Affidavit of Public Notice
on DANR Website**

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

Application No.: 8637-3

Name of Applicant: Wilde Air Service LLC

Date of Posting: 8/1/2022

Date of Removal: 9/13/2022



Ron Duvall, Water Rights Permitting Administrator

9/13/22

Date

Subscribed and sworn to before me, a notary public, this 13th day of Sept, 20 22.



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

