

WATER PERMIT NO. 8531-3

Name of Applicant: **Old Tree Dairy**

Address: **46318 214th St, Volga SD 57071**

Phone: **605 627-9352**

Amount of Water Claimed: **2.22 cfs**

Total Acres: **222 acres**

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

Water to be used for: **irrigation**

County: **Brookings**

Type of Waste Disposal System:

Location: **5 miles south of Volga SD**

PRIORITY

Date Received: **7-19-21**

Application/License Fee: **\$ 1150**

Corrected Application Received:

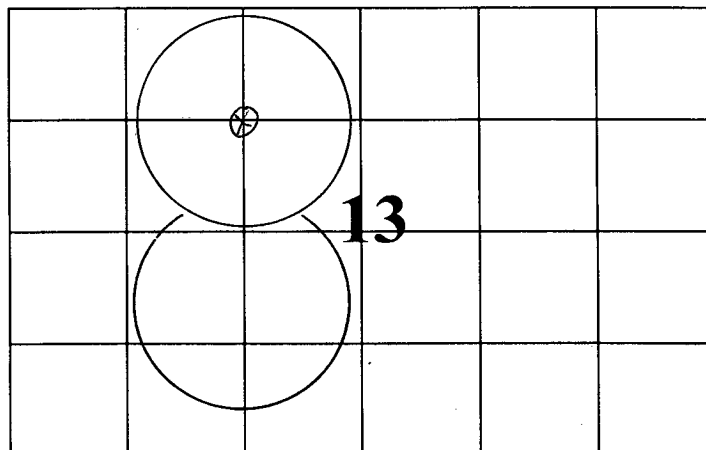
Period of Annual Use: **April 1 – October 31**

Remarks:

Diversion Point: **approximate center of the NW**

1/4 Sec 13-T109N-R51W

Land to be Irrigated: **W 1/2 Sec 13-T109N-R51W**



Depth of Well: **53 feet**

Well Driller: **Thein Well**

Remarks:

Type of Map: **aerial**

Prepared by: **Tom Pierce, Farmers Implement**

Reviewed and the Number Assigned on: **7-19-21**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 8531-3**

Date of first receipt of application July 19, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8531-3 to Old Tree Dairy, c/o Frido Verpaalean, 46318 214th St, 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. 8531-3 appropriates 2.22 cubic feet of water per second from one well to be completed into the Big Sioux:Brookings Aquifer (approximately 53 feet deep) located in the approximate center of the NW 1/4 Section 13 for irrigation of 222 acres located in the W 1/2 Section 13; all in T109N-R51W. This site is located approximately 5 miles south of Volga 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 – October 31.
3. The date from which applicant may claim right is July 19, 2021.
4. The date of approval of Permit No. 8531-3 is September 20, 2021.
5. One-fifth of the construction is to be completed on or before March 20, 2024.
6. All construction is to be completed on or before September 20, 2026.
7. Water is to be put to beneficial use on or before September 20, 2030.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit No. 8531-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals under this Permit shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8531-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

SEP 27 2021
date



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

RECEIVED

JUL 19 2021

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8531-3</u> (office use only)	Hydrologic Unit <u>10170202</u>	WATER RIGHTS PROGRAM
	Basin <u>Sioux River</u>		
	Newspaper <u>Brookings Register</u>		

PAID
JUL 19 2021
Ck# 4360

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 Old Tree Dairy

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

Mailing Address 46318 214th st Volga SD 57071
(Address) (City) (State) (Zip Code)

Phone 605-627-9352 Mobile 605-695-4639 Email _____

2. Amount of water claimed 2.22 *CFS or 1000 **GPM ***AF Total Acreage 247.222
(*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 NW 1/4 SEC 13 T109N - R51W
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

N:4414.9970 W: 9654.2120 County Brookings

5. County or counties where water will be used Brookings

6. Annual period during which water is to be used April - October 31

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 NW 1/4 SEC 13 T109N - R51W	31	NW 1/4 OF SW 1/4 SEC 13 T109N - R51W	28 18
NE 1/4 OF NW 1/4 SEC 13 T109N - R51W	31	NE 1/4 OF SW 1/4 SEC 13 T109N - R51W	28 18
SW 1/4 OF NW 1/4 SEC 13 T109N - R51W	35 31	SW 1/4 OF SW 1/4 SEC 13 T109N - R51W	17 31
SE 1/4 OF NW 1/4 SEC 13 T109N - R51W	35 31	SE 1/4 OF SW 1/4 SEC 13 T109N - R51W	17 31

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

Drilling a well and installing 2 new center pivot irrigation systems

I, Frido Verpaalen, 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 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:

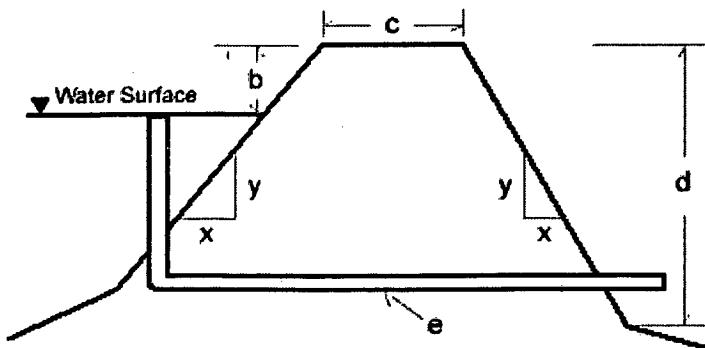
c) Well Depth (required) 53 Depth to Top of Water Bearing Material 7 Depth to Water from Surface 7d) Distance to nearest domestic well on applicant's property Property owned by others 1500**2. Wastewater Disposal System Information**a) Type of System (i.e. septic tank, drain field) b) System Capacity (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 Feetj) Drainage Area Above Dam Acres

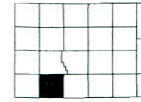
MEASURE EQUIVALENTS

8 fluid ounces	16 TBSP	3 fluid ounces	5 TBSP
6 fluid ounces	12 TBSP	2 fluid ounces	4 TBSP
5 fluid ounces	11 TBSP	1 fluid ounce	2 TBSP
4 fluid ounces	8 TBSP	1/2 fluid ounce	1 TBSP

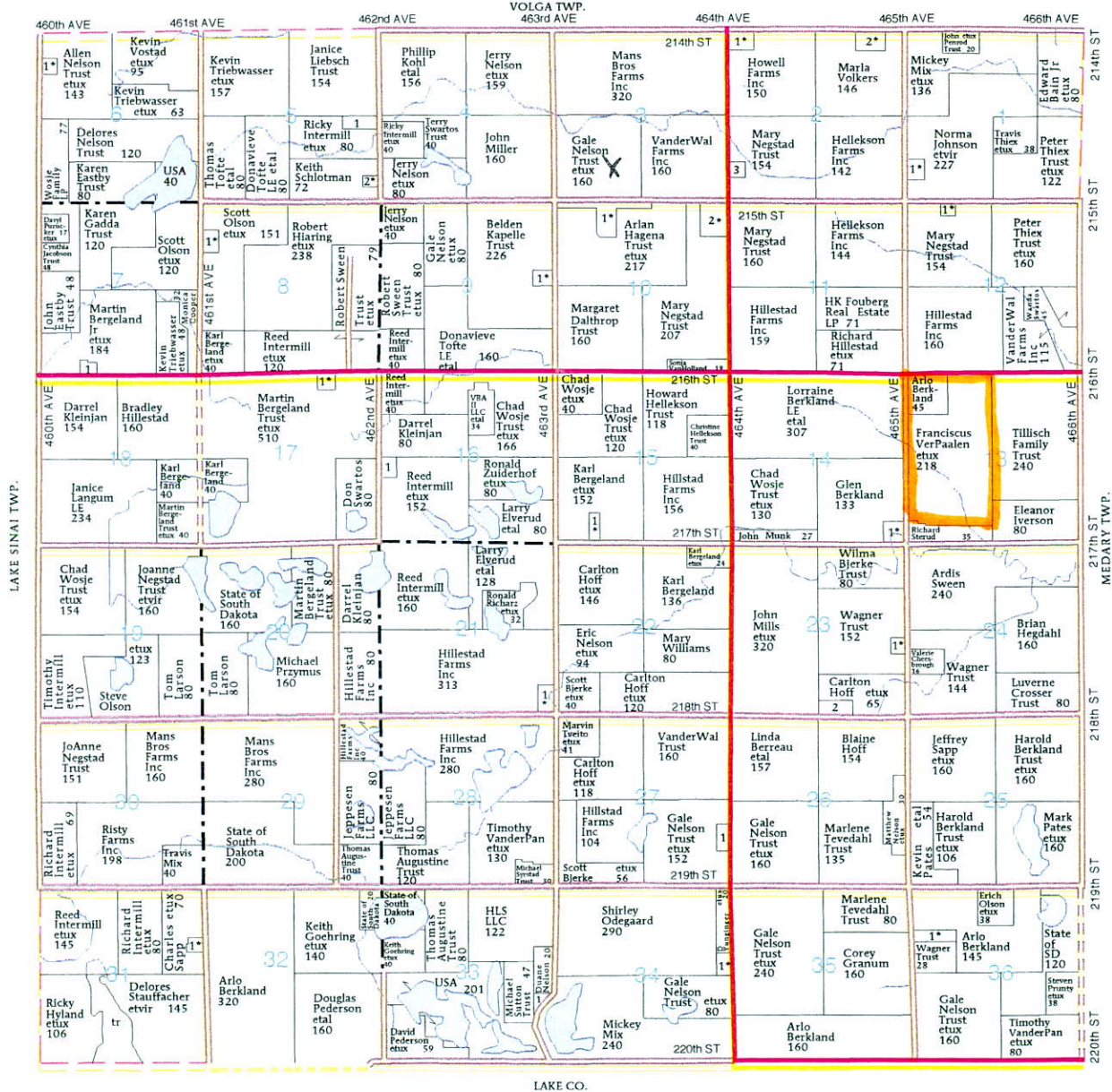
T-109-N

OSLO PLAT

(Landowners)



R-51-W



OSLO TOWNSHIP

SECTION 1

1. Rud, Gregory etux 13

SECTION 2

1. Molengraaf, John etux 10

2. Jung, Timothy etux 12

3. Tietjen, Michael 6

SECTION 5

1. Eng, David 15

2. Steffensen, Brian etux 8

SECTION 6

1. Christianson, Harlan etal 9

SECTION 7

1. Ishol Trust, Dorothy 13

SECTION 8

1. Novak, Randy etux 8

SECTION 9

1. Peterson, Scott etux 14

SECTION 10

1. Melchert, Brian etux 21

2. Eggers, Howard etux 14

SECTION 12

1. VanMaanen, Timothy etux 6

SECTION 14

1. Sapp, Charles etux 14

SECTION 15

1. Assmussen, Eric etux 8

SECTION 16

1. Intermill, Lance 8

SECTION 17

1. Adler, Richard etux 10

SECTION 21

1. Raguse, Troy etux 7

SECTION 23

1. Wagner, Matthew etux 8

2. Haigh, Emelie 15

SECTION 27

1. Niemann, Craig 8

SECTION 31

1. Harrison, Michael etux 10

SECTION 33

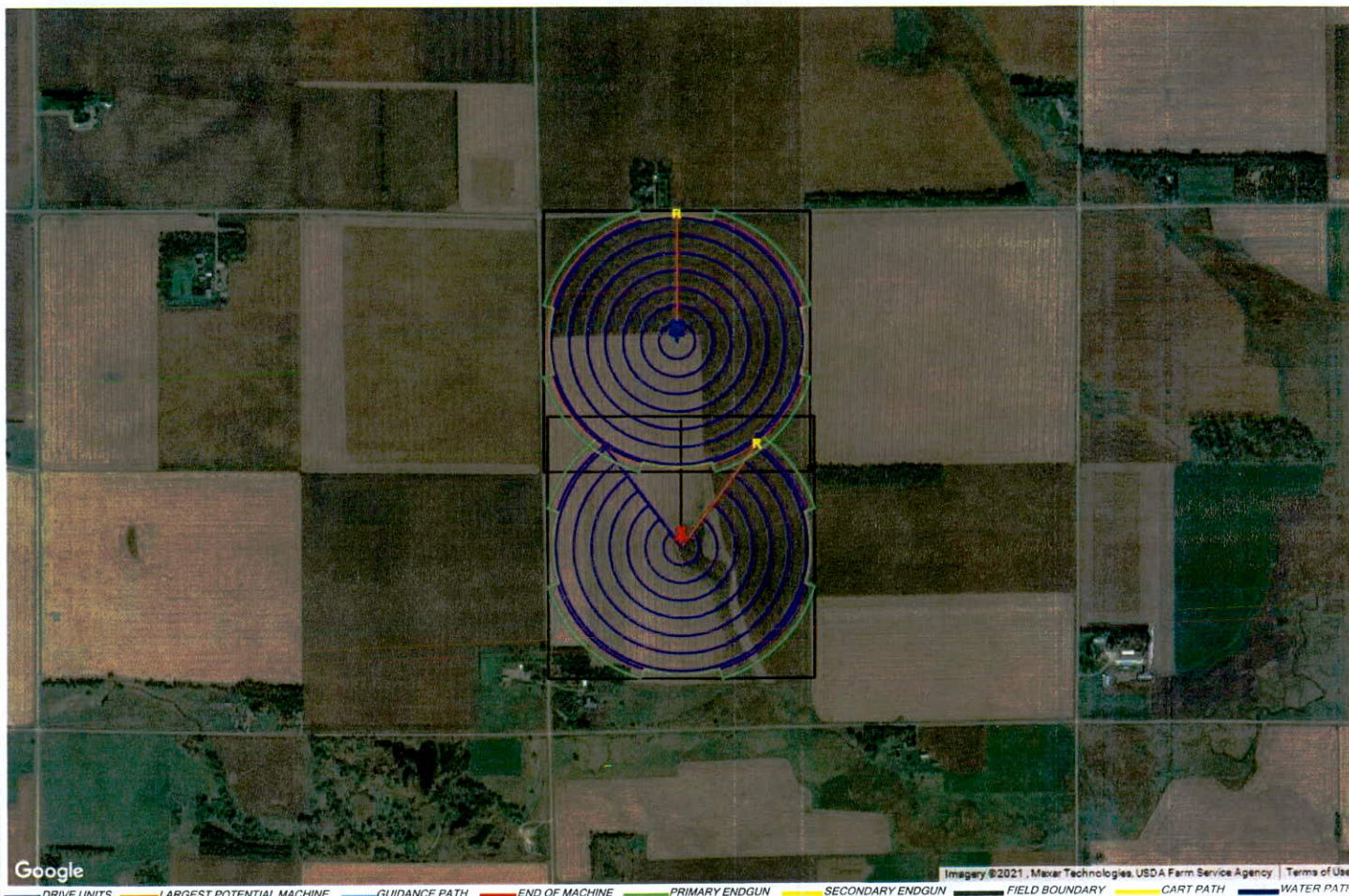
1. Olson, Gary 6

SECTION 34

1. Jost, Richard etux 11

SECTION 36

1. Wagner Trust, Mark etux 12





Project Name - Old Tree Dairy
Version Name - Old Tree Dairy_Version
Map Summary Report



Field Name	Design Name	Machine Category	Machine Area (ac)	No. of Towers	Total Machine Length (ft)	Total Irrigated Area (ac)
Pivot_2_782021142610423	OLD TREE NORTH SYSTEM1	Large Field Electrical Pivot 7000	122.33	7	1288.04	132.32

(OLD TREE NORTH SYSTEM1)	Spans and Overhang	Corner	Endgun*	Bender / DropSpan	Keep-Out
Irrigated Area using (ac)	120.09	0	12.23	0	0.00

* Estimated

Total Span Length (ft) 1260.00

Overhang Length (ft) 27.00

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	180.00	12 ga cable / 11 cond	34 RPM Baldor Helical	11.2 x 24 New wTube	None	Standard
2	6 5/8	180.00	12 ga cable / 11 cond	34 RPM Baldor Helical	11.2 x 24 New wTube	None	Standard
3	6 5/8	180.00	12 ga cable / 11 cond	34 RPM Baldor Helical	11.2 x 24 New wTube	None	Standard
4	6 5/8	180.00	12 ga cable / 11 cond	34 RPM Baldor Helical	11.2 x 24 New wTube	None	Standard
5	6 5/8	180.00	12 ga cable / 11 cond	34 RPM Baldor Helical	11.2 x 24 New wTube	None	Standard
6	6 5/8	180.00	12 ga cable / 11 cond	34 RPM Baldor Helical	11.2 x 24 New wTube	None	Standard
7	6 5/8	180.00	12 ga cable / 11 cond	34 RPM Baldor Helical	11.2 x 24 New wTube	None	Standard

Primary Endgun

Endgun Angles (OLD TREE NORTH SYSTEM1)	Endgun 1	Endgun 2	Endgun 3	Endgun 4
Start Angle	16 deg	105.25 deg	196 deg	285.25 deg
End Angle	75 deg	164.25 deg	255 deg	344.25 deg

Field Name	Latitude	Longitude	Pivot Road Angle	Pivot Road Offset	Start Angle	End Angle
Pivot_2_782021142610423	44.25010087018252	-96.90390260844778	-	-	0 deg	360 deg



Project Name - Old Tree Dairy
Version Name - Old Tree Dairy_Version
Map Summary Report



Field Name	Design Name	Machine Category	Machine Area (ac)	No. of Towers	Total Machine Length (ft)	Total Irrigated Area (ac)
 Pivot_2_782021142843200	OLD TREE SOUTH SYSTEM 1	Large Field Electrical Pivot 8000	97.69	7	1297.04	107.34

(OLD TREE SOUTH SYSTEM 1)	Spans and Overhang	Corner	Endgun*	Bender / DropSpan	Keep-Out
Irrigated Area using (ac)	97.25	0	10.09	0	0.00

* Estimated

Total Span Length (ft) 1260.00

Overhang Length (ft) 36.00

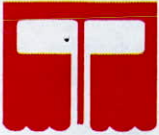
Flex/Transition/Other Lengths (ft) 1.04

S.No	Diameter	Length (ft)	Cable Size	Motor Options	Tire Size	Bender / DropSpan	Profile
1	6 5/8	180.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard
2	6 5/8	180.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard
3	6 5/8	180.00	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
6	6 5/8	180.00	12 ga cable / 11 cond shielded	34 RPM Baldor Helical	11.2 x 24 New Tubeless		Standard
7	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 (OLD TREE SOUTH SYSTEM 1)	Endgun 1	Endgun 2	Endgun 3	Endgun 4
Start Angle	36 deg	106.5 deg	197.25 deg	286.5 deg
End Angle	73.75 deg	163 deg	253.75 deg	322.75 deg

Field Name	Latitude	Longitude	Pivot Road Angle	Pivot Road Offset	Start Angle	End Angle
Pivot_2_782021142843200	44.24432516183799	-96.90375240474677	35.82 deg	-	35.82 deg	323.31 deg



THEIN WELL

PO BOX 778 • 11355 HWY 71 NE • SPICER, MN 56288
102 DUNDAS RD • MONTICELLO, MN 55362
CLARA CITY, MN 56222 • VERMILLION, SD 57069
www.theinwell.com • E-mail: theinwell@tds.net
1-800-450-8000

WELLS ~ PUMPS
SALES ~ SERVICE

Since 1893

Test Hole Log - Verpaalean

Owner: Frido Verpaalean

TEST HOLE #1

Volga, South Dakota
Section 13
Twp. 109N
R. 051W

Drilled: 07/07/21

GPS: N: 44°14.9970
W: 96°54.2120

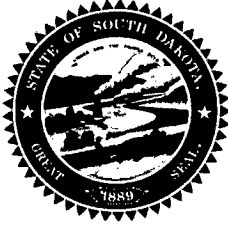
DEPTH (ft.)	FORMATION
0-2	Top Soil
2-7	Brown Clay
7-53	Gravel
53-60	Brown Clay

Licensed, Bonded and Insured

CERTIFIED MASTER WATER WELL CONTRACTOR
Equal Opportunity Employer

MEMBER
NGWA

MEMBER
AWWA



OFFICE OF THE SECRETARY OF STATE

STEVEN J. BARNETT, SECRETARY OF STATE

JASON LUTZ, DEPUTY SECRETARY OF STATE

Filing Information

Name: **OLD TREE FARMS, LLC**

General Information

SOS Business ID **DA012856**
Filing Type: Limited Liability Company - Domestic
 01/02/2007
Status: Good Standing
Duration Term: Perpetual
Business Type: Farm
Managed By: Manager-Managed

Registered Agent Address
FRANCISCUS A L W VERPAALLEN
46318 214TH ST
VOLGA, SD 57071-6346

Principal Address
46318 214TH STREET
VOLGA, SD 57071

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

Date Filed	Filing Description	Image #
11/04/2020	2021 Annual Report	B0157-6651
12/18/2019	2020 Annual Report	B0122-9257
12/24/2018	2019 Annual Report	B0083-9380
12/23/2017	2018 Annual Report	B0048-7313
12/31/2016	2017 Annual Report	B0021-0942
12/28/2015	2016 Annual Report	
12/30/2014	2015 Annual Report	
01/15/2014	2014 Annual Report	
02/14/2013	2013 Annual Report	
03/29/2012	2012 Annual Report	
03/23/2011	2011 Annual Report	
03/03/2010	2010 Annual Report	
02/23/2009	2009 Annual Report	
01/31/2008	2008 Annual Report	
01/16/2007	Farm Qualification	
01/02/2007	Initial Filing	DA012856

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date July 19, 2021

RECEIVED OF Old Tree Farms LLC 46318 214th St. Volga SD 57071

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

Fee for Application for Permit No. <u>8531-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>950.00</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>8531-3</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>1150.00</u>

By *Eric Gronlund*
Chief Engineer
EM

Schlaak, Karen

From: Tom Pierce <tomp@farmersii.com>
Sent: Monday, July 19, 2021 5:20 PM
To: Schlaak, Karen
Subject: RE: [EXT] Application for Old Tree Dairy

Yes please make the changes you noted.

Thanks,
Tom

Tom Pierce

Sales Manager
Farmers Implement and Irrigation
605-692-6153
tomp@farmersii.com

From: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Sent: Monday, July 19, 2021 2:49 PM
To: tomp@farmersii.com
Subject: Application for Old Tree Dairy

Tom

We received the water permit application for Old Tree Dairy which I am assuming you helped prepare. The total acreage as listed on Item No. 2 is 217 acres. The total acreage as listed on Item No. 7 (the breakdown by quarter-quarter) is 222 acres.

Also when looking at the map submitted with the application, the south pivot does not cover the entire S ½ of the SW ¼ and some acres overlap into the S ½ NW ¼. Using ArcMap, I came up with the following breakdown of acres.

Section 13-T109N-R51W

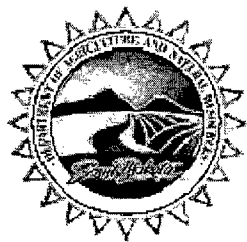
NW ¼ NW ¼	31 acres
NE ¼ NW ¼	31 acres
SW ¼ NW ¼	35 acres
SE ¼ NW ¼	35 acres

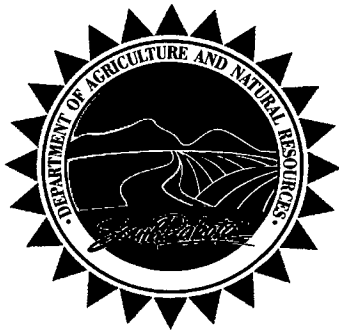
NW ¼ SW ¼	28 acres
NE ¼ SW ¼	28 acres
SW ¼ SW ¼	17 acres
SE ¼ SW ¼	17 acres

Total	222 acres
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Do you agree with these changes? The application/license fee will remain the same.
If you have questions, let me know.

Karen Schlaak





**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. 8531-3, Old Tree Dairy**

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. 8531-3, Old Tree Dairy, 46318 214th St, Volga SD 57071.

The Chief Engineer is recommending APPROVAL of Application No. 8531-3 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. 8531-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals under this Permit shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8531-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 31, 2021

Report to the Chief Engineer
On Water Permit Application No. 8531-3
Old Tree Dairy c/o Frido Verpaalean

August 19, 2021

Water Permit Application No. 8531-3 proposes to appropriate water at a maximum instantaneous diversion rate of 2.22 cubic feet per second (cfs) from one well to be completed into the Big Sioux: Brookings aquifer (approximately 53 feet deep). The well is to be located in the approximate center of the NW ¼ of Section 13 for the irrigation of 222 acres located in the W ½ of Section 13; all in T109N-R51W. The site is located in Brookings County approximately five miles south of Volga, SD.

AQUIFER: Big Sioux: Brookings (BS: B)

HYDROGEOLOGY:

The Big Sioux aquifer is an alluvium-mantled glacial outwash composed of sand and gravel with certain areas containing thin interbedded clay and till layers (Hamilton, 1989; Niehus, 1997). The Big Sioux aquifer has a cumulative thickness that can range from 4 to 54 feet but averages a cumulative thickness of 22 feet in Brookings County (Hansen, 1988). The maximum thickness of the Big Sioux aquifer occurs near the City of Brookings, SD (Hamilton, 1988). The Big Sioux aquifer is generally under unconfined conditions near the Big Sioux River, but can be overlain by till along the boundaries as well as other areas of the aquifer (Hamilton, 1989). The Big Sioux aquifer is hydraulically connected with the Shindler, and Newton Hills aquifers as well as the Missouri and Big Sioux Rivers (Niehus, 1997). The direction of groundwater movement of the Big Sioux aquifer is generally to the south towards the Big Sioux River (Hansen, 1988).

The Big Sioux aquifer is comprised of twelve management units. The diversion point for Water Permit Application No. 8531-3 will be completed into the Brookings management unit of the Big Sioux aquifer. The Big Sioux: Brookings aquifer underlies approximately 323,000 acres in Brookings, Deuel, Hamlin, Kingsbury, and Moody Counties and contains approximately 1,453,000 acre-feet (ac-ft) of recoverable water in storage (Hedges et al., 1982, Stonesifer, 2013). The areal extent of the Big Sioux: Brookings aquifer is displayed in Figure 1 along with the location of the proposed diversion point.

A test hole completion report was submitted with Water Permit Application No. 8531-3. The report lists "topsoil" from 0 to 2 feet below land surface, "brown clay" from 2 to 7 feet, "gravel" from 7 to 53 feet, and "brown clay" from 53 to 60 feet (Water Rights, 2021d). A static water level was not recorded at the time of test hole completion (July 2021). Well completion reports on file with the DANR-Water Rights Program for wells completed into the Big Sioux: Brookings aquifer within approximately two miles of the diversion point for this application list static water levels at well completion varying from 5 to 30 feet below land surface (Water Rights, 2021d). The Big Sioux: Brookings aquifer is expected to be unconfined at the diversion point based on

the submitted test hole report and lithologic logs on file for nearby observation wells (SDGS, 2021; Water Rights, 2021b and 2021d).

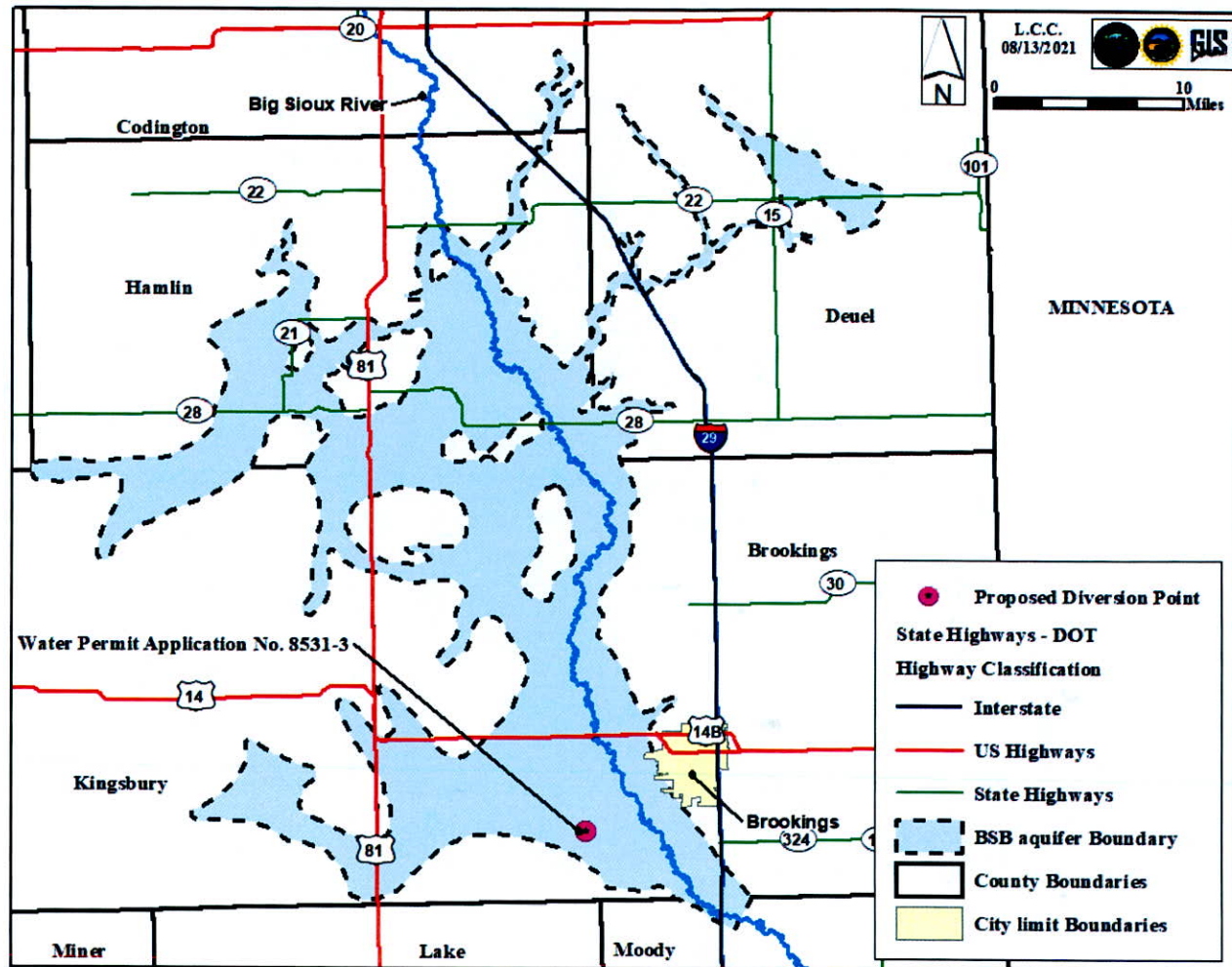


Figure 1: Map showing the approximate areal extent of the Big Sioux: Brookings aquifer including the proposed diversion point location of Water Permit Application No. 8531-3 (Hedges et al., 1982; Stonesifer, 2013; Water Rights, 2021b and 2021c).

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 within the Big Sioux: Brookings aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8531-3 proposes to appropriate water from the Big Sioux: Brookings aquifer for irrigation. The probability of unappropriated water being available from the aquifer can be evaluated by considering SDCL 46-6-3.1, which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. However, an application may be approved for a water distribution system for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge.” The Big Sioux: Brookings aquifer is not older than or stratigraphically lower than the Greenhorn Formation, and the applicant’s proposed use is not for use in a water distribution system as defined by SDCL 46-1-6(17). Therefore, the average annual recharge and average annual withdrawal rates to and from the Big Sioux: Brookings aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the Big Sioux: Brookings aquifer is primarily through the infiltration of precipitation and seepage from the Big Sioux River and its tributaries (Koch, 1980). The recharge rate to the Big Sioux: Brookings aquifer was estimated by utilizing observation well data (Hedges et al., 1985). The average annual recharge rate that was estimated for the Big Sioux: Brookings aquifer was 4.0 inches per year (Hedges et al., 1985). The estimated areal extent of the Big Sioux: Brookings aquifer is 323,000 acres (Stonesifer, 2013). Therefore, the estimated average annual recharge to the Big Sioux: Brookings aquifer is approximately 107,700 acre-feet per year (ac-ft/yr).

Discharge

Discharge from the Big Sioux: Brookings aquifer is primarily through evapotranspiration, interaction with the Big Sioux River, and well withdrawals (Hamilton, 1989). Currently, there are 257 water rights/permits authorized to appropriate water from the Big Sioux: Brookings aquifer (Water Rights, 2021c). There are 11 future use permits reserving water from the Big Sioux: Brookings aquifer presently. For the purpose of estimating the average annual withdrawal rate from the Big Sioux: Brookings aquifer, the 11 future use permits are assumed to be fully developable for a total of 6,686 ac-ft/yr (Water Rights, 2021c).

Table 1 summarizes the 46 non-irrigation water rights/permits authorized to appropriate water from the Big Sioux: Brookings aquifer with the estimated annual use for each water right/permit as determined by their maximum permitted diversion rate or annual volume. The amount of water that can be withdrawn was estimated by assuming the non-irrigation water rights/permits limited by an annual volume will withdraw their entire appropriated volume every year. It is estimated that the non-irrigation water rights/permits limited only by a diversion rate will pump at their maximum permitted diversion rate for 60 percent of the time. Water Right Nos. 534A-3,

617-3, 3117-3, 4950-3, and 5071-3 are held by municipalities that are connected to a rural water system and are maintained for standby purposes (Friedeman, 2020; Water Rights, 2021c); as such, the average annual water use for these water rights has been estimated to be 0 ac-ft/yr in Table 1. Overall, the average annual withdrawal rate for the Big Sioux: Brookings aquifer for non-irrigation water rights/permits is approximately 13,151 ac-ft/yr (Table 1) (Water Rights, 2021c).

Table 1: Estimated annual non-irrigation water rights/permits from the Big Sioux: Brookings aquifer (Water Rights, 2021c).

Use Type	No. of Water Rights/Permits	Diversion rate (cfs)	Permitted Volume (ac-ft)	Estimated Annual Use (ac-ft/yr)
MUN	16	5.19	1,914	4,169
IND	2	0.24	N/A	106
RWS	16	7.56	4,037	7,321
COM	9	3.24	N/A	1,405
SHD	2	0.07	N/A	30
GEO	1	0	120	120
TOTAL:	46	16.30	6,071	13,151
MUN: Municipal; IND: Industrial; RWS: Rural Water System; COM: Commercial; SHD: Suburban Housing Development; GEO: Geothermal				

Currently, there are 211 irrigation water rights/permits appropriating water from the Big Sioux: Brookings aquifer (Water Rights, 2021c). The reported annual irrigation withdrawals from the Big Sioux: Brookings aquifer are shown in Table 2. The average annual withdrawal rate for the Big Sioux: Brookings aquifer irrigation water rights/permits that have reported over the period of record is approximately 8,685 ac-ft/yr (Table 2) (Water Rights, 2021a). Since the number of irrigation water rights/permits has continued to increase over the period of record, the estimated average annual withdrawal rate for irrigation appropriations for the entire period of record may not accurately reflect the current level of development. The average annual withdrawal rate for irrigation appropriations from 2009 to 2020 was estimated to reflect the current level of irrigation developments in the Big Sioux: Brookings aquifer. The average annual withdrawal rate for the Big Sioux: Brookings aquifer from 2009 to 2020 is approximately 9,331 ac-ft/yr (Table 2) (Water Rights, 2021a).

There are domestic wells completed into the Big Sioux: Brookings aquifer that do not require a water right/permit, so the withdrawal amount from those wells is unknown (Water Rights, 2021d). Due to their relatively low diversion rates, withdrawals from domestic wells are not considered to be a significant portion of the hydrologic budget. Additionally, with the development of rural water systems in areas where the Big Sioux: Brookings aquifer is the uppermost aquifer available; it is likely some domestic users may have transitioned to rural water. Therefore, the quantity of water withdrawn by domestic wells is estimated to be negligible to the hydrologic budget for the Big Sioux: Brookings aquifer.

Table 2: Reported historic irrigation use from the Big Sioux: Brookings aquifer (Water Rights, 2021a).

Year	No. of Permits	Reported Pumpage (acre-feet)	Year	No. of Permits	Reported Pumpage (acre-feet)
1979	184	6,144.00	2002	149	12,410.94
1980	187	9,837.00	2003	149	11,380.47
1981	197	9,040.00	2004	156	11,809.91
1982	155	4,551.86	2005	159	11,513.48
1983	161	8,227.46	2006	161	14,325.04
1984	188	8,177.60	2007	164	12,730.13
1985	181	4,951.40	2008	166	12,505.85
1986	179	2,854.70	2009	174	9,172.90
1987	171	10,015.00	2010	172	2,713.39
1988	167	18,521.40	2011	174	8,527.61
1989	166	13,930.70	2012	177	19,482.51
1990	175	5,862.92	2013	198	15,432.29
1991	165	7,771.74	2014	212	9,947.64
1992	162	2,331.60	2015	209	8,796.02
1993	162	1,042.90	2016	210	10,267.40
1994	160	2,854.62	2017	209	9,572.04
1995	161	3,862.25	2018	211	7,952.80
1996	154	7,220.95	2019	211	106.29
1997	153	5,650.00	2020	209	10,000.76
1998	157	8,109.71	MIN	149	106
1999	155	7,841.04	MAX	212	19,483
2000	153	8,933.72	AVG	174	8,685
2001	149	8,384.81	AVG 2009-2020	197	9,331

Hydrologic Budget Summary

The estimated average annual withdrawal rate from the Big Sioux: Brookings totals approximately 29,390 ac-ft/yr (irrigation: 9,331 ac-ft/yr; non-irrigation: 13,151 ac-ft/yr; future use: 6,686 ac-ft/yr; Water Permit Application No. 8531-3 (if approved) (applying 1 ft per acre): 222 ac-ft/yr) (Water Rights 2021a and 2021c). The estimated average annual recharge rate to the Big Sioux: Brookings aquifer is approximately 107,700 ac-ft/yr. Overall, the estimated average annual recharge rate to the Big Sioux: Brookings aquifer is greater than the estimated average annual withdrawal rate from the aquifer. Therefore, there is a reasonable probability that unappropriated water is available for the appropriation proposed by this permit application.

OBSERVATION WELL DATA:

Administrative Rule of South Dakota (ARSD) 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 DANR-Water Rights Program monitors 77 observation wells completed into the Big Sioux: Brookings aquifer (Water Rights, 2021b). These observation wells provide data on how the aquifer reacts to regional climatic conditions and local pumping. There are three observation wells within approximately three miles of the proposed diversion point. The closest observation

well to the proposed diversion point is observation well BG-77G (approximately 0.4 miles northwest). The hydrographs for these three observation wells are displayed in Figures 2 through 4 (Water Rights, 2021b).

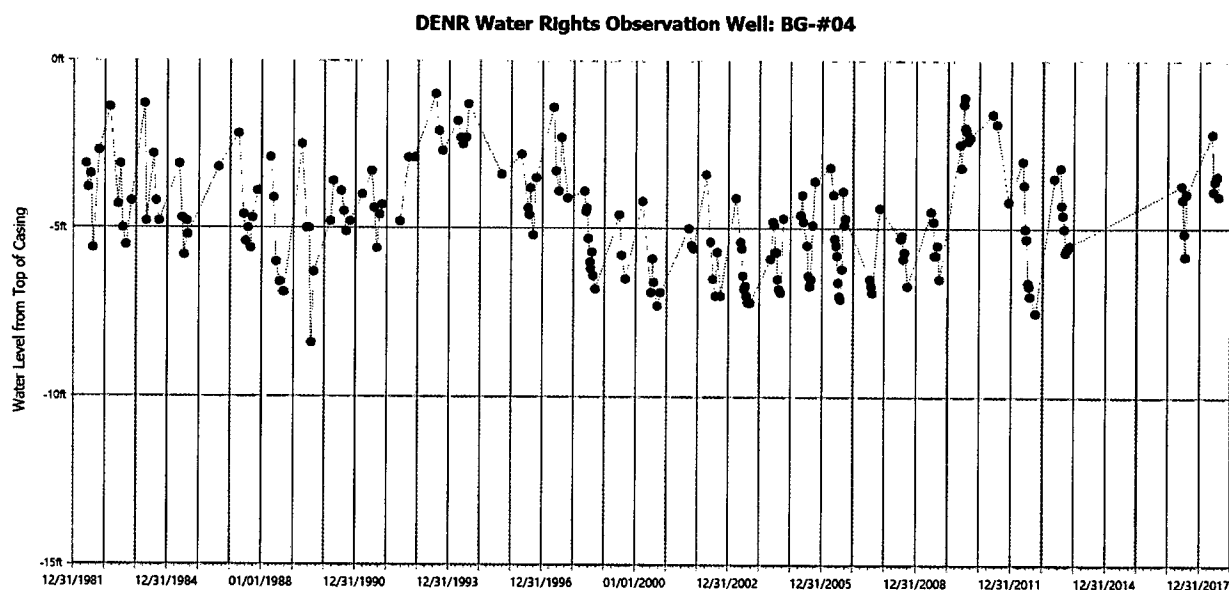


Figure 2: Hydrograph of the Big Sioux: Brookings aquifer observation well BG-#04, located approximately 2.8 miles east of the proposed diversion point (Water Rights, 2021b).

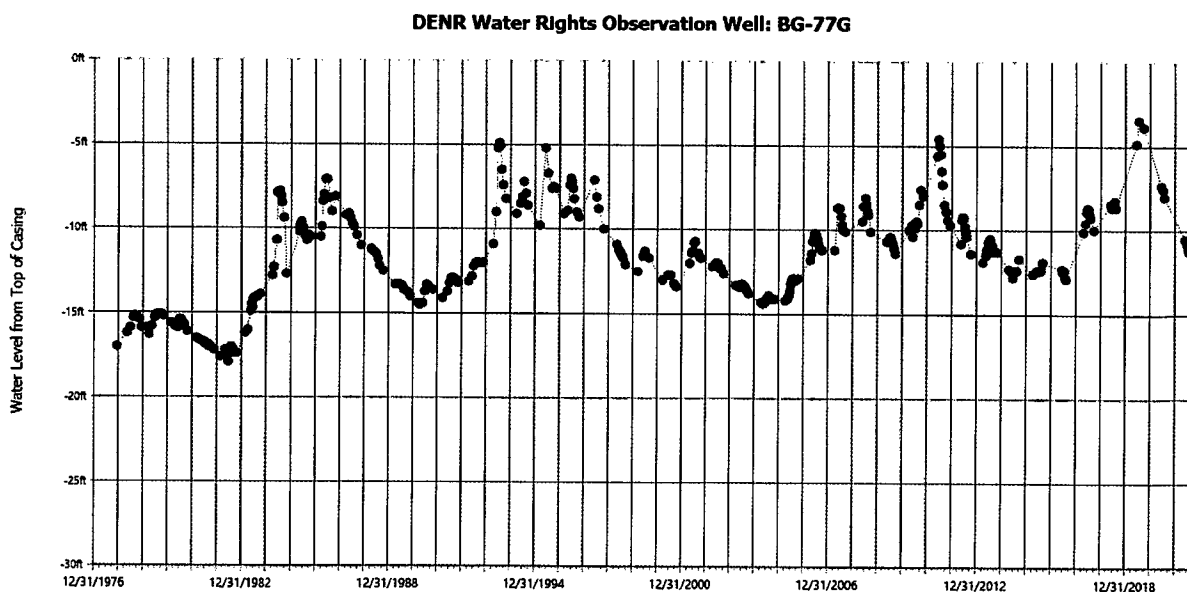


Figure 3: Hydrograph of the Big Sioux: Brookings aquifer observation well BG-77G, located approximately 0.4 miles northwest of the proposed diversion point (Water Rights, 2021b).

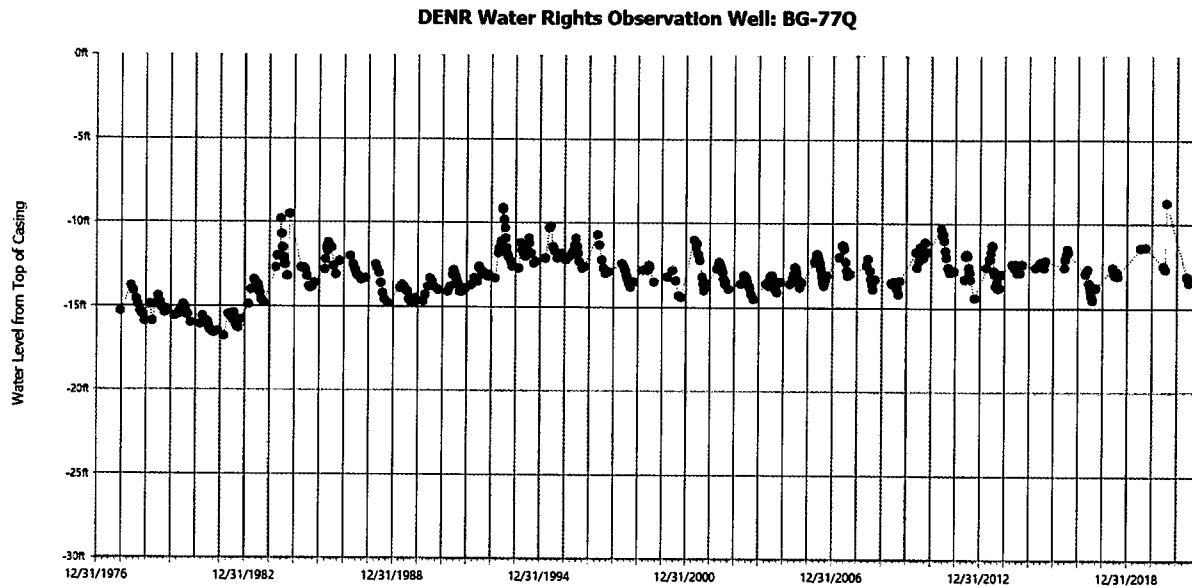


Figure 4: Hydrograph of the Big Sioux: Brookings aquifer observation well BG-77Q, located approximately 2.3 miles northwest of the proposed diversion point (Water Rights, 2021b).

The hydrographs for the observation wells display stable to increasing water levels over their respective periods of record. The Big Sioux River is in the proximity of observation well BG-#04 and as a result, the water level recorded by the hydrograph can fluctuate more noticeably compared to observation wells located further from the Big Sioux River. The hydrographs for the Big Sioux: Brookings aquifer indicate that the aquifer responds well to climatic conditions because water levels are rising during wetter periods and declining to a stable water level during drier periods. Additionally, the water levels in the observation wells display that the amount of recharge to and natural discharge from the aquifer greatly exceeds pumping with the aquifer returning to pre-pumping conditions between irrigation seasons. Aquifer recovery indicates that climatic conditions and therefore, the effects of recharge to and natural discharges from the aquifer govern the long-term fluctuations of waters levels in the aquifer rather than the impacts of pumping from the Big Sioux: Brookings aquifer. By recognizing that both recharge to and natural discharge from an aquifer can be captured for pumping, the observation well hydrographs demonstrate unappropriated water is available for the proposed appropriation.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

Currently, there are 257 water rights/permits authorized to appropriate water from the Big Sioux: Brookings aquifer, including 11 future use permits reserving water from the Big Sioux: Brookings aquifer (Water Rights, 2021c). There are seven water rights/permits authorized to appropriate water from the Big Sioux: Brookings aquifer within three miles of the proposed diversion point (Water Rights, 2021c). The seven water rights/permits are shown in Figure 5 and identified in Table 3. The nearest water right/permit (not held by the applicant) to the proposed diversion point completed into the Big Sioux: Brookings aquifer is Water Right No. 7500-3 located approximately 0.6 miles northwest of the proposed diversion point.

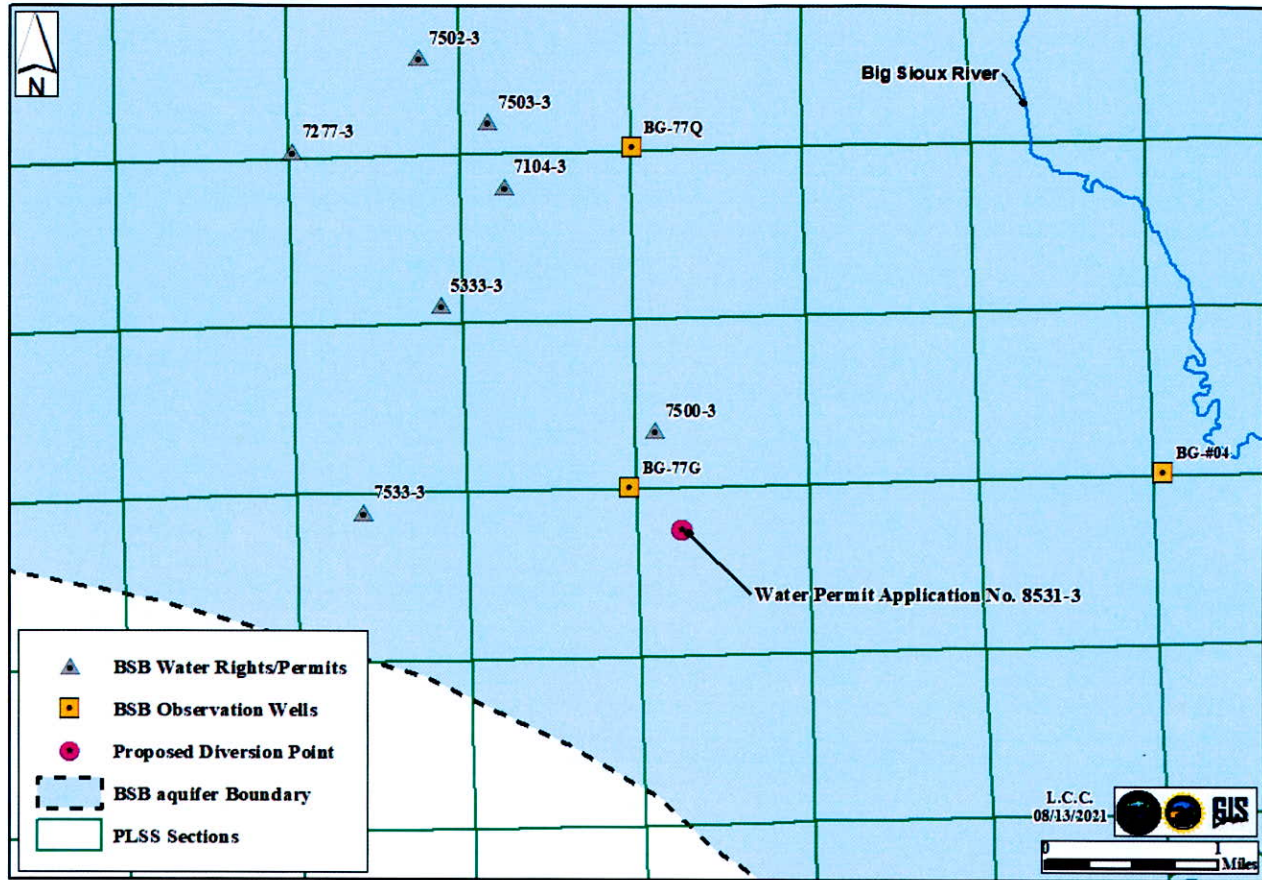


Figure 5: Map Showing the site location of Water Right Permit Application No. 8531-3, nearby observation wells, and nearby water rights/permits completed into the Big Sioux: Brookings aquifer (Water Rights, 2021b and 2021c).

Table 3: Water rights/permits from the Big Sioux: Brookings aquifer within approximately three miles of the proposed diversion point (Water Rights, 2021c).

Permit No.	Name	Use	Status	Rate (cfs)	Acres
5333-3	Vanderwal Yards Inc	IRR	LC	1.61	N/A
7104-3	Howell Farms Inc	IRR	LC	1.56	150
7277-3	Old Tree Farms	COM	LC	0.1	N/A
7502-3	Howell Farms Inc	IRR	LC	1.34	240
7503-3	Howell Farms Inc	IRR	LC	1.34	140
7500-3	Hillestad Farms	IRR	LC	1	144
7533-3	Chad or Rhonda Wosje	IRR	PE	0.89	37
LC: Licensed Water Permit; PE: Water Permit					
COM: Commercial; IRR: Irrigation					

There are domestic wells on file with the DANR-Water Rights Program that are completed into the Big Sioux: Brookings aquifer, with the closest domestic well on file (not held by the applicant) approximately 0.8 miles southwest of the proposed diversion point (SDGS, 2021; Water Rights, 2021b and 2021d). There could potentially be other domestic wells completed into

the Big Sioux: Brookings aquifer near the proposed diversion point that are not on file with the DANR-Water Rights Program.

The Big Sioux: Brookings aquifer is generally under unconfined conditions in Brookings County (Hamilton, 1989). The proposed diversion point is expected to be under unconfined conditions based on the submitted test hole report and lithologic logs for the nearby observation wells (Water Rights, 2021d). Observation well data (see Figures 2 through 4) documents minimal drawdown from withdrawals of existing wells near the proposed diversion point. Therefore, pumping from the proposed diversion point is not expected to significantly lower water levels within the aquifer. Drawdown created by pumping generally does not extend far from the pumped diversion point in an unconfined aquifer. The exact drawdown behavior cannot be known without an aquifer performance test. In Brookings County, there have been no complaints submitted to the DANR-Water Rights Program Regarding potential well interference for wells completed into the Big Sioux: Brookings aquifer (Water Rights, 2021e).

Within approximately two miles of the proposed diversion point for this application, the Big Sioux: Brookings aquifer has saturated aquifer thickness ranging from approximately 20 to 40 feet, with the depth to the top of aquifer materials ranging from approximately 1 to 15 feet below land surface, and static water levels at well completion varying from approximately 5 to 30 feet below land surface (SDGS, 2021; Water Rights 2021b and 2021d). This would allow for sufficient saturated thickness for a pump to be placed 20 feet below top of aquifer; which is required for the well to be considered adequate under ARSD 74:02:04:20(6).

The Water Management Board recognizes that putting water to beneficial use requires a certain amount of drawdown to occur. The Board has developed rules to allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

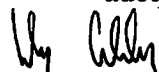
“A well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer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

The Big Sioux: Brookings aquifer is a relatively thin aquifer with a limited amount of water in storage. While the average annual withdrawal would not exceed average annual recharge to the aquifer, conditions may occur when the withdrawal exceeds recharge. When this occurs, water will be removed from storage; consequently, reducing the saturated thickness of the aquifer. If the saturated thickness is reduced to the extent that water rights/permits can no longer pump at their developed or “historically established” diversion rates, this may be considered an adverse impact. If approved, the water permit should include a qualification that the well owner should control their withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

Any drawdown created from pumping this diversion point is not expected to cause unlawful impairment on existing water right/permit holders or domestic users with adequate wells considering the location of the proposed diversion point and the lack of well interference complaints for adequate wells completed into the Big Sioux: Brookings aquifer. Therefore, there is a reasonable probability that any interference from the proposed appropriation will not impose unlawful impairments on existing users with adequate wells.

CONCLUSIONS:

1. Water Permit Application No. 8531-3 proposes to appropriate water at a maximum instantaneous diversion rate of 2.22 cfs from one well (approximately 53 feet deep) to be completed into the Big Sioux: Brookings aquifer for the irrigation of 222 acres. The site is located in Brookings County approximately five miles south of Volga, SD.
2. There is a reasonable probability that unappropriated water is available from the Big Sioux: Brookings aquifer for this proposed appropriation based on the hydrological budget and observation well data.
3. There is a reasonable probability this proposed diversion will not unlawfully impair adequate wells authorized by existing water rights or domestic use wells.



Lindsey Cederberg
Natural Resources Engineer I
SD DANR - Water Rights Program

Reviewed by:



Adam Mathiowetz, PE
Natural Resources Engineer IV
SD DANR - Water Rights Program

References

- Friedeman, B., 2020. "Public Water Systems on Full-Time Basis List." Environmental Scientist DANR-Drinking Water Program, Joe Foss Bldg, Pierre, SD.
- Hamilton, L. J., 1988. Major Aquifers in Brookings County, South Dakota: Information Pamphlet No. 40. USGS, Vermillion, SD.
- Hamilton, L. J., 1989. Water Resources of Brookings and Kingsbury Counties, South Dakota: Water-Resources Investigation Report 88-4185. USGS, Huron, SD.
- 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. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.

- Hedges, L.S., Allen, J., Holly, D.E., 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge; United States Army Corps of Engineers Contract DACW 45-80-C-0185.
- Koch, N. C., 1985. Water Resources of Deuel and Hamlin Counties, South Dakota; Water-Resources Investigations Report 84-4069. SDGS, Huron, SD.
- Niehus, C. A., 1997. Major Aquifers in Lincoln and Union Counties, South Dakota, U.S. Geological Survey Information Pamphlet 49. U.S. Geological Survey. Vermillion, SD.
- SDGS, 2021. South Dakota Geological Survey Lithologic Logs Database. Accessed August 18, 2021. <http://cf.sddanr.net/lithdb/>.
- Water Rights, 2021a. "1979-2020 Irrigation Summaries by Aquifer", SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Water Rights, 2021b. Observation Well Data, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2021c. Water Right/Permit Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2021d. Well Completion Reports, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2021e. County Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Affidavit of Publication

State of South Dakota

Exhibit "A"

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

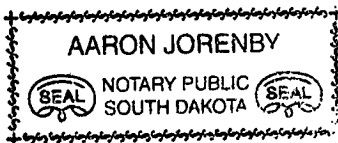
LEG# 16303 Notice of Application

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

September 9, 2021

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-One Dollars and Ninety-Two Cents \$41.92



Kmfoiles

10 day of

September

2021

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

Ag

RECEIVED
SEP 15 2021
WATER RIGHTS
PROGRAM

**NOTICE OF
APPLICATION
NO. 8531-3 TO
APPROPRIATE WATER**

Notice is given that Old Tree Dairy, c/o Frido Verpaalean, 46318 214th St, Volga SD 57071 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second from one well to be completed into the Big Sioux-Brookings Aquifer (approximately 53 feet deep) located in the approximate center of the NW 1/4 Section 13 for irrigation of 222 acres located in the W 1/2 Section 13; all in T109N-R51W. This site is located approximately 5 miles south of Volga SD. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8531-3 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 September 20, 2021.

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 September 20, 2021.

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 1X at the total approximate cost of \$41.92.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, August 31, 2021 10:53 AM
To: registerclassifieds@brookingsregister.com
Subject: 8531-3, Old Tree Dairy
Attachments: 8531-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on September 9, 2021.

Old Tree Dairy, c/o Frido Verpaalean, 46318 214th St, Volga SD 57071 (605 695-4639) 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 NEWSPAPER RIGHT AWAY.**

August 31, 2021

Old Tree Dairy
c/o Frido Verpaalean
46318 214th St
Volga SD 57071

Dear Mr. Verpaalean:

Water Permit Application No. 8531-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Brookings Register printed at Brookings SD (Ph # 605 692-6271). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

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. 8531-3 to Appropriate Water

Notice is given that Old Tree Dairy, c/o Frido Verpaalean, 46318 214th St, Volga SD 57071 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second from one well to be completed into the Big Sioux:Brookings Aquifer (approximately 53 feet deep) located in the approximate center of the NW 1/4 Section 13 for irrigation of 222 acres located in the W 1/2 Section 13; all in T109N-R51W. This site is located approximately 5 miles south of Volga SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8531-3 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 September 20, 2021.

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 September 20, 2021.

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

Published once at the total approximate cost of_

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, September 28, 2021 10:31 AM
To: Tom Pierce
Subject: Water Permit No. 8531-3
Attachments: 1922.pdf

FYI - Attached is a copy of the approved Water Permit No. 8531-3 for Old Tree Dairy.

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

SEP 27 2021

Old Tree Dairy
c/o Frido Verpaalean
46318 214th St
Volga SD 57071

Dear Mr. Verpaalean:

Enclosed is Water Permit No. 8531-3 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:

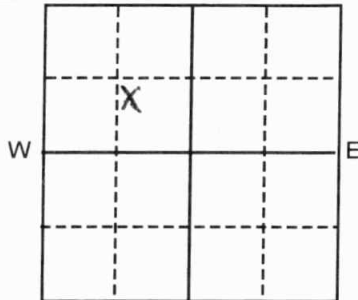
8531-3

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 NW 1/4 Sec 13 Twp 109 Rg 51County Brookings

North

Please mark well
location with an "X"

Well Completion Date

October 26, 2021

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

1,500.0 ft. from SOUTH OF SEPTIC (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	12.00 IN	0.0 FT	33.0 FT	17.75 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	9	Lb/gal	0.0 Ft	28.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

TREMIE PIPED

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12.00 InchesLength 20.0 FeetMaterial STAINLESS STEELSlot Size .080 Set From 33.0 Feet to 53.0 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?

☒ No, Why Not?
Lab to which water IRRIGATION ONLY
quality sample sent for analysisWell Owner: FRIDO VERPAALLENBusiness Name: OLD TREE FARMS, LLCAddress: 46318 214TH STCity, State, Zip: VOLGA SD 57071

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	2
CLAY BROWN	2	7
GRAVEL	7	53
CLAY BROWN	53	63

STATIC WATER LEVEL 12.0 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

41.0 Ft. After 4.5 Hrs. pumped 500.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

12" North Well GPS N 44 14.9970 W 96 54.2120This 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:

RECEIVED

JAN 25 2022

Date: _____

WATER RIGHTS
PROGRAM

Old Tree Farms - Verpaalen Sec 13 Volga

Legend

 12" well

216th St

216th St

Section 13

Old Tree Farms (Verpaalen) 53' 12" well

51' 12" well

465th Ave

Google Earth

3000 ft



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. **8531-3**

I have this day, **June 3, 2024**, made a thorough examination of the water use system constructed by **Old Tree Dairy, 46318 214th St, Volga, SD 57071** of Permit No. **8531-3**, bearing the priority of **July 19, 2024** authorizing the diversion of **2.22** cu. ft. per second of the waters of **Big Sioux:Brookings Aquifer** for **irrigation** purposes, in **Brookings** County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: **Thein Well Co, Inc**
- 2) No. of Wells **2**
- 3) Depth(s) **53 & 63** feet
- 4) Well log is available **Y** If no, explain in comments

Casing:

- 1) Diameter **12** inches
- 2) Length **33 & 31** feet
- 3) Type **Plastic**

Screen:

- 1) Type **Stainless**
- 2) Length **20 & 20** feet
- 3) Static water level **12 & 10** feet

Pump:

- 1) Make **2- Submersibles**
- 2) Model **Unknown**
- 3) Size **Unknown**
- 4) Capacity **600 total** 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 **PVC**
- 2) Size **8** inches
- 3) Length **2,100** feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make 2 Valleys
- 2) Overall length 1300 feet
- 3) Number of towers 7
- 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: irrigating 24 acres more than permitted

E. Condition and Location:

1. The system is in new condition with the point(s) of diversion located as follows: From the NW corner of Sec 13 T109N R51W "NORTH" WELL: 1320 ft S 1325 ft E, Lat 44.24993 Long -96.90364 (SE 1/4 NW 1/4) "SOUTH" WELL: 1935 ft S & 1320 ft E, Lat 44.24840 Long -96.90346 (SE 1/4 NW 1/4) .
2. The works are capable of diverting and conveying to the place of use 1.33 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

All land in Sec 13 T109N R51W

NW 1/4 NW 1/4 32 acres

NE 1/4 NW 1/4 32 acres

SE 1/4 NW 1/4 36 acres

SE 1/4 NW 1/4 36 acres

NW 1/4 SW 1/4 39 acres

NE 1/4 SW 1/4 39 acres

SE 1/4 SW 1/4 16 acres

SW 1/4 SW 1/4 16 acres

comprising a total of 246 acres of land and the license should be issued for 1.33 cfs.

3. All structures, wells and lands on map Y

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

FSA photographs and the ArcGIS software were used to estimate the irrigated acreage.

The pump rate reported in a recent Irrigation Questionnaire was used to establish the combined system flow capacity for the two wells. Both wells supply water to each pivot independently but not simultaneously. The pivot systems are rated at 600 gpm.

The mailing address and the telephone number in the permit materials are current.

I visited with Mr. Frido VerPalen, owner (605/695-4639) during the field visit.



Darrell DeBoer
Water Rights Inspector
DENR, Water Rights Program

Date report completed: June 4, 2024

New permit application mailed to Old Tree Dairy June 6, 2024, to bring South Well & 24 unpermitted acres into the fold. Pending approval of new permit application, can be incorporated, and licensed based on inspection. AMD

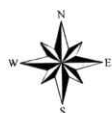


LOCATION OF WELLS

From the NW coner
 Sec 13 T109N R51W
 "NORTH" WELL
 1320 ft S 1325 ft E
 Lat 44.24993 Long -96.90364
 "SOUTH" WELL
 1935 ft S & 1320 ft E
 Lat 44.24840 Long -96.90346

IRRIGATED LAND

All land in Sec 13 T109N R51W
 NW 1/4 NW 1/4 32 acres
 NE 1/4 NW 1/4 32 acres
 SE 1/4 NW 1/4 36 acres
 SE 1/4 NW 1/4 36 acres
 NW 1/4 SW 1/4 39 acres
 NE 1/4 SW 1/4 39 acres
 SE 1/4 SW 1/4 16 acres
 SW 1/4 SW 1/4 16 acres



0 900 1,800 3,600 5,400 7,200 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

June 6, 2024

8531-3

Old Tree Dairy
c/o Frido Verpaalean
46318 214th St
Volga SD 57071

Dear Mr. Verpaalean:

I am writing today in regard to Water Permit No. 8531-3, held by Old Tree Dairy, authorizing the diversion of 2.22 cubic feet of water per second from one well, located in the center of the NW ¼ Section 13 for the irrigation of 222 acres, located in the W ½ Section 13; all in T109N-R51W, Brookings County, South Dakota.

A recent inspection was conducted by staff engineer, Darrell DeBoer, for the purpose of licensing the irrigation system. The inspection found a total of 246 acres being irrigated from two wells. Any increase in irrigated acres requires additional permitting.

Please find enclosed, a partially completed irrigation permit application for the over developed acres, with no addition to the rate of diversion. Fees for this new application will be \$500.00. The inspection and licensing fee of \$200.00 will be waived, as it has already been paid. Checks can be made payable to the SD Water Rights Program. You may also submit the necessary fees over the phone by calling our Fiscal Office (605) 773-5559.

If you have any questions concerning these acres, the second well, or need help completing the application, please do not hesitate to call. My direct line is (605) 910-5187.

Sincerely,

Amanda Dewell
Permitting Administrator
Water Rights Program
Amanda.Dewell@state.sd.us

NOTE: Once this new application is reviewed, if it is approved, it will be licensed immediately based on the inspection report completed for Permit No. 8531-3.

enclosure