

WATER PERMIT NO. 8277-3

Name of Applicant: Haroldson Living Trust

Address: 20039 465th Ave, Bruce SD 57220

Phone: 605 695-2313

Amount of Water Claimed: 1.33 cfs

Total Acres: 120 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Brookings

Type of Waste Disposal System:

Location: 1/2 mile north of Bruce

PRIORITY

Date Received: 3-30-17

Application/License Fee: \$ 950

Corrected Application Received:

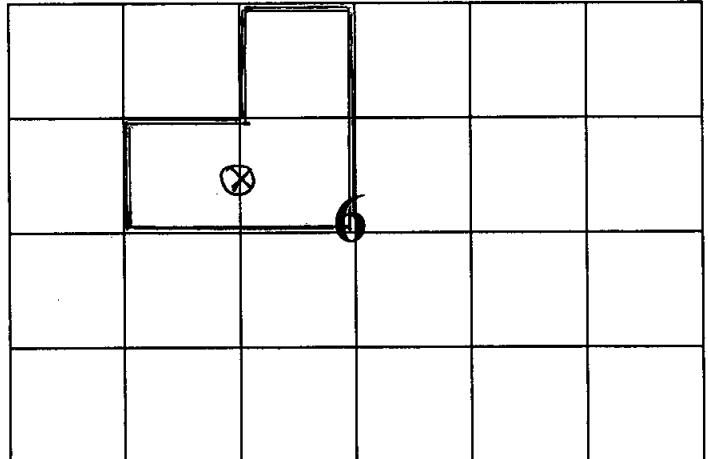
Period of Annual Use: May 1 – October 31

Remarks:

Diversion Point: S 1/2 NW 1/4 Sec 6-T111N-R50W

Land to be Irrigated: S 1/2 NW 1/4, NE 1/4 NW

1/4 Sec 6-T111N-R50W



Depth of Well: 42 feet

Well Driller: Kaiser Well Drilling

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 3-30-17

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8277-3</u> (office use only) Hydrologic Unit <u>10170202</u>
	Basin <u>Sioux River</u>
	Newspaper <u>Brookings Register</u>

RECEIVED
MAR 30 2017
WATER RIGHTS
PROGRAM

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 HAROLDSON LIVING TRUST, GAYLORD HAROLDSON (TRUSTEE)

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

Mailing Address 20039 465th AVE BRUCE SD 57220
(Address) (City) (State) (Zip Code)

Phone 832-942-2820 Mobile 605-695-2313 Email gharoldson@yahoo.com / kyle.haroldson@gmail.com

2. Amount of water claimed 1.71 *CFS or 770 **GPM 600 ***AF Total Acreage 120
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply 1 new well

4. Location of point of diversion 1 well in NW Qtr Sec 6 T111N Rg 50W (S 1/2 NW 1/4)
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

County Brookings ☒

5. County or counties where water will be used Brookings

6. Annual period during which water is to be used MAY - 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
SE 1/4 NW 1/4 Sec 6 T111N R50W	40		
SW 1/4 NW 1/4 Sec 6 T111N R50W	40		
NE 1/4 NW 1/4 Sec 6 T111N R50W	40		

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

Approximately 30 acres of vegetables to be irrigated with drip and overhead sprinkler irrigation. The remaining acres will be grain (corn in 2017).

I, Gaylord Haroldson, Trustee, the applicant, certify under
Name of Person Title (if applicable)

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

SOUTH DAKOTA
WATER PERMIT NO. 8277-3

Date of first receipt of application March 30, 2017.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8277-3 to Haroldson Living Trust, c/o Gaylord Haroldson, 20039 465th Ave, Bruce SD 57220 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. 8277-3 appropriates 1.71 cubic feet of water per second from one well to be completed into the Big Sioux:Brookings Aquifer (42 feet deep) located in the S 1/2 NW 1/4 Section 6 for irrigation of 120 acres located in the S 1/2 NW 1/4, NE 1/4 NW 1/4 Section 6; all in T111N-R50W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – October 31.
3. The date from which applicant may claim right is March 30, 2017.
4. The date of approval of Permit No. 8277-3 is June 19, 2017.
5. One-fifth of the construction is to be completed on or before December 19, 2019.
6. All construction is to be completed on or before June 19, 2022.
7. Water is to be put to beneficial use on or before June 19, 2026.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8277-3 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: *Jeanne Goodman*

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

JUN 30 2017
date



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 Kaiser 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:

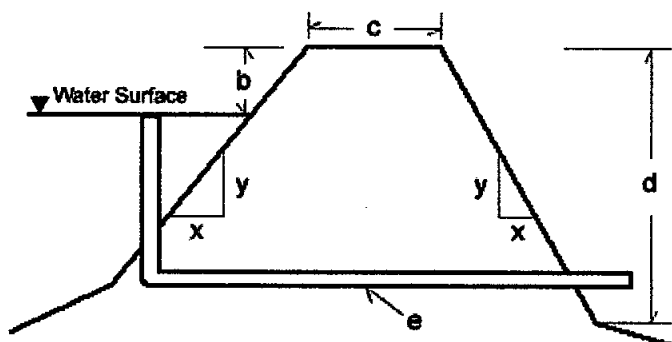
c) Well Depth (required) 42 Depth to Top of Water Bearing Material 2'8" Depth to Water from Surface 2'8"d) Distance to nearest domestic well on applicant's property Property owned by others 3500+**na X Wastewater Disposal System Information**a) Type of System (i.e. septic tank, drain field) b) System Capacity (gallons) Year Constructed c) Connected to the City of Sanitary System**na X Dugout Information**a) Surface Dimensions Depth b) Depth to water (ground surface to water level) **na X 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:

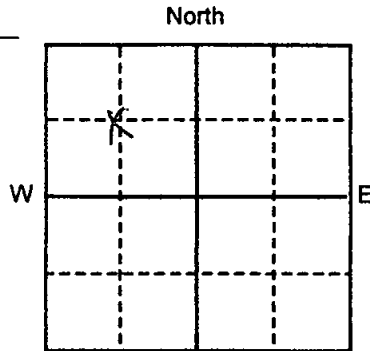
b) Freeboard c) Crest Width Crest Length d) Height e) Primary Outlet Capacity If pipe, diameter f) Secondary Spillway Capacity Spillway Width

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

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW 1/4 1/4 Sec 6 Twp 111N Rg 50WCounty BROOKINGSPlease mark well
location with an "X"

Well Completion Date

3-25-17

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

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☒ Test holes
☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well
METHOD OF DRILLING:
DIRECT ROTARY

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
40.0 LB/FT	3.00 IN	0.0 FT	32.0 FT	3.00 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
GRTWELDF	2	54.0 Lb/gal	0.0 Ft	30.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure _____

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 3.00 Inches Length 10.0 Feet
 Material PVC
 Slot Size .60 Set From 32.0 Feet to 42.0 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
quality sample sent for analysisWell Owner: HAROLDSON LIVING TRUST, GAYLARD HAROLDSONBusiness Name: Haroldson LIVING TRUSTAddress: 20039 465th AVECity, State, Zip: Brookings SD 57220

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	2
YELLOW MIXED SAND	2	15
GREY FINE - MED	15	27
COURSE TO MED	27	31
YELLOW FINE- MED	31	36
FINE- YELLOW SAND	36	42
YELLOW CLAY	42	47

STATIC WATER LEVEL 2.8 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: AIR LIFT 3/4 POLY☐ Bailed☐ Other

Pumping Level Below Land Surface

30.0 Ft. After _____ Hrs. pumped 100.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

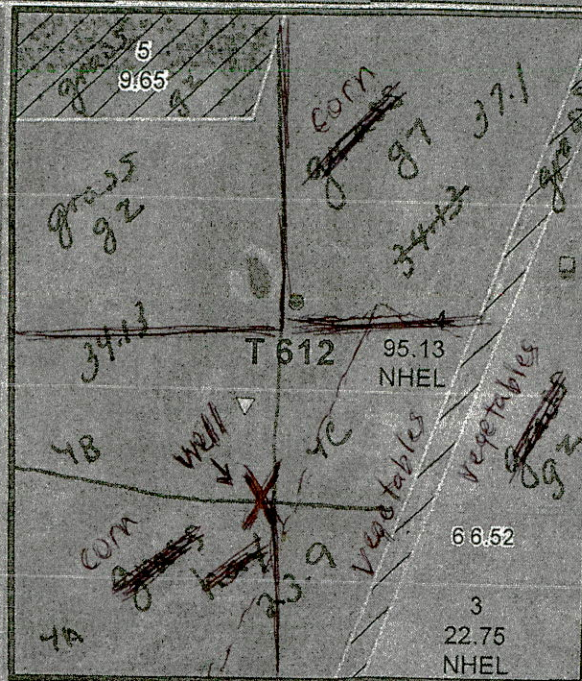
This well was drilled under license # 689 and this report is true and accurate.Drilling firm: KAISER WELL DRILLING INC

Signature of License Representative:

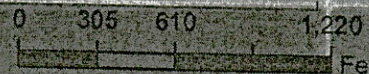
Signature of Well Owner or Equitable Property Holder:

Date: 3-28-17

Brookings County, South Dakota



6-23-19



Common Land Unit
Cropland  Non-cropland
 Conservation Reserve Program

Wetland Determination Identifiers

☐ Restricted Use
☐ Limited Restrictions
☐ Exempt from Conservation Compliance Provisions

 Tract Boundary
  Section Line



Non irr

2014 Program Year

Map Created June 18, 2014

Farm 8610

2012 Ortho-Photography - not to scale

6 -111N -50W

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

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 3-30, 20 17

RECEIVED OF Gaylord Haroldson, 20039 465th Ave, Bruce SD 57220

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

Fee for Application for Permit No. <u>8277-3</u> to Appropriate Water, to construct and to put water to beneficial use	750 00
Fee for Application for Permit No. _____ to Appropriate Water for Future use	
Fee to retain Future Use Permit No. _____ after period of seven years.	
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8277-3</u>	200 00
Fee for Filing Transfer Form _____	
Fee for _____	
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____	
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____	
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____	
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____	
(Any Other Work Provided by Law)	
TOTAL	950.00

No. **08214**

By Jeanne Goodman
Chief Engineer
KS



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

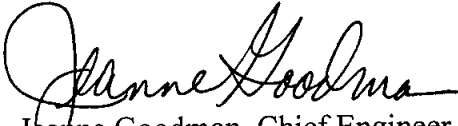
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8277-3, Haroldson Living Trust**

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. 8277-3, Haroldson Living Trust, c/o Gaylord Haroldson, Trustee, 20039 465th Avenue, Bruce SD 57220.

The Chief Engineer is recommending APPROVAL of Application No. 8277-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8277-3 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.


Jeanne Goodman, Chief Engineer
May 26, 2017

REPORT TO THE CHIEF ENGINEER

Water Permit Application No. 8277-3

Haroldson Living Trust

May 22, 2017

Water Permit Application No. 8277-3 proposes to appropriate water at a maximum diversion rate of 1.71 cubic feet per second (cfs) from a well to be completed into the Brookings management unit of the Big Sioux aquifer (BS:B). The proposed well is expected to be completed to an approximate depth of 42 feet deep and located in the S ½ NW ¼ of Section 6, T111N-R50W. The water from this application will be used for the irrigation of 120 acres located in the S ½ NW ¼, NE ¼ NW ¼ Section 6, T111N-R50W. Prior to this application, Water Permit 3363-3 was approved for the acreage covered under this application and was cancelled when the system was not constructed within the allowed length of time.

AQUIFER: Big Sioux: Brookings (BS:B)

HYDROGEOLOGY

The Brookings management unit of the Big Sioux aquifer is a glacial outwash deposit located primarily in Brookings, Kingsbury, and Hamlin counties and extends into Codington, Deuel, and Moody counties (Hedges et al., 1982; Stonesifer, 2013). The BS:B is composed of well-sorted, very permeable glacial outwash sand and gravel, with grain sizes mostly classified as ranging from medium sand to medium gravel (Hamilton, 1989). The BS:B is underlain by a relatively impermeable glacial till, and in areas away from the Big Sioux River and its major tributaries it is overlain by glacial till (Hamilton, 1989). The average thickness of the aquifer in Brookings County is 30 feet (Hamilton, 1989), and from the test hole data, the saturated thickness of the aquifer at the proposed well location is 40 feet.

Stonesifer (2013) estimated the areal extent of the BS:B by combining the delineations of the aquifer as determined by Hamilton (1989), Hanson (1988), Hedges et al., (1982), and Kume (1985). The areal extent of the BS:B as estimated by Stonesifer (2013) is 323,000 acres. Using the average thickness of 30 feet and assuming a storativity of 0.15, the BS:B is estimated to contain 1,453,500 acre-ft of recoverable water in storage.

The static water level of the test well at the time of construction (3/25/17) was 2.8 feet, indicating that the aquifer at this location is unconfined. Data from the observation well network shows that the direction of groundwater flow is generally from the north to the south and locally towards the Big Sioux River (Water Rights, 2017c). The Brookings management unit of the Big Sioux aquifer is hydrologically connected to the Battle Creek aquifer and numerous management units within the Big Sioux aquifer. These management units are the North, North Deer Creek, Unnamed Creek, Six Mile Creek, and the Aurora (Hedges et al., 1982). In addition to being hydrologically connected to adjacent aquifers, the Big Sioux: Brookings is also hydrologically connected to the Big Sioux River and other surface waters (Hamilton, 1989).

South Dakota Codified Law 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 proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and existing rights within the Big Sioux: Brookings aquifer.

WATER AVAILABILITY

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source.” If the source of the water is older than or stratigraphically lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board need not take into consideration the balance of aquifer recharge and withdrawal. Here, the water source is not older or lower than the Greenhorn Formation and a water distribution system is not involved. Therefore, the balance of withdrawal and recharge must be considered.

Hydrologic Budget

Recharge

Recharge to the BS:B is by infiltration of precipitation and seepage from the Big Sioux River and its tributaries (Koch, 1980). In areas where the BS:B is hydrologically connected to the surface water, when the potentiometric surface of the aquifer is lower than the surface water elevation, some recharge to the aquifer may also occur. Some inflow may occur from the adjacent aquifers, however this has not been quantified.

Hedges et al. (1985) estimated the recharge rate to the Brookings management unit of the Big Sioux aquifer through the analysis of the observation well data. Using data from 58 unconfined observation wells in the management unit, they determined that the average annual recharge rate to the aquifer is 4.0 inches per year. Other recharge rates have been determined through a variety of methods for the entire aquifer or areas not exclusive to the Brookings management unit. Hedges et al. (1985) also performed a base-flow analysis for the entire Big Sioux aquifer and determined the average recharge rate to be 6.5 in/yr. Koch (1980) estimated the average recharge rate to the unconfined portion of the Big Sioux aquifer in Brookings, Deuel, and Hamlin counties to be 6.57 in/yr through the use of a finite-difference model. Kume (1985) estimated recharge to the Big Sioux aquifer in Deuel and Hamlin counties from infiltration of precipitation and subsurface inflow from Codington County to be 5.11 in/yr. Hansen (1988) used observation wells to determine the average recharge in the Big Sioux aquifer in Moody County, and using a storage coefficient of 0.2, the average recharge was 6.5 in/yr.

Using the average annual recharge rate of 4.0 inches per year from the observation well analysis within the Big Sioux: Brookings by Hedges et al. (1985) and the area of the aquifer from Stonesifer (2013), the estimated annual recharge to the management unit is 107,000 acre feet per year.

Discharge

Discharge from the Big Sioux: Brookings occurs through evapotranspiration, seepage to the Big Sioux River and other hydrologically connected bodies of surface water, and well withdrawals

(Hamilton, 1989; Kume, 1985). Currently, there are 272 water rights/permits for the Big Sioux: Brookings for a number of different types of uses (Water Rights, 2017a). Irrigation accounts for 218 of these water rights/permits, however not all of these are currently withdrawing water. Of the remaining 54 appropriations, 11 have reserved water for future use, 16 are for municipal systems, 13 are for rural water systems, and the remaining 14 are for a variety of uses including commercial and industrial.

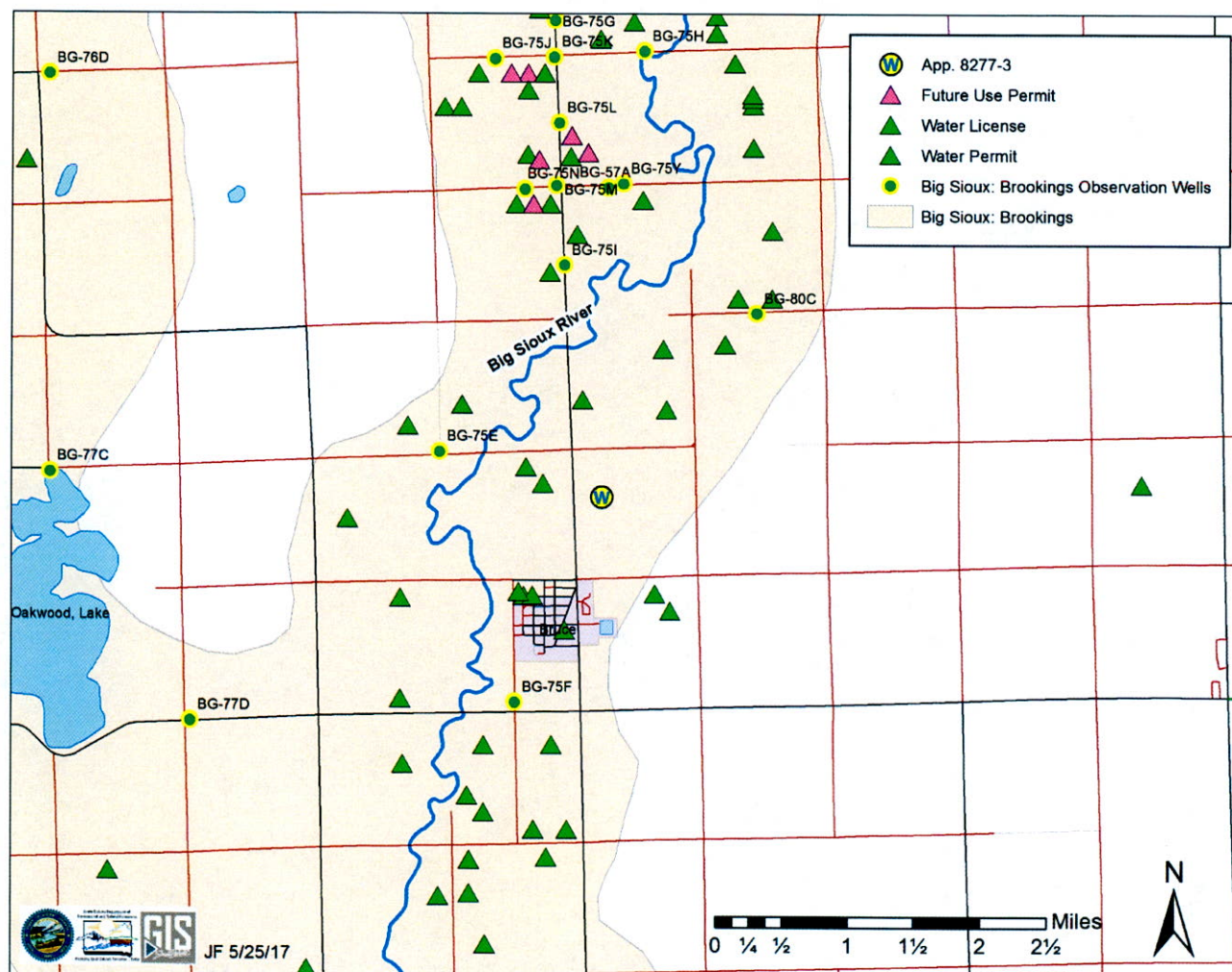


Figure 1. Map showing water rights/permits and observation wells in the Big Sioux: Brookings near this application (Water Rights, 2017a and 2017c) using aquifer boundaries compiled by Stonesifer (2013)

For non-irrigation appropriations, some are limited by an annual rate of withdrawal and others are limited by the instantaneous diversion rate. For water rights/permits limited by the instantaneous diversion rate, the total maximum diversion rate is 17.11 cfs. For the rights/permits that are limited by the annual rate, the rate of these appropriations totals 6,537 ac-ft per year, and the appropriations reserved for future use is 7,120 ac-ft per year (Water Rights, 2017a). For determining the average annual withdrawal, water rights/permits that are limited by an annual volume are assumed to use the entire volume, while rights/permits limited by pumping

rate are estimated to pump 60% of the time. Permits for the future use of water are assumed to develop and use 100% of their appropriation. Water use for non-irrigation purposes in the Big Sioux: Brookings aquifer would then be an estimated 21,090 ac-ft per year.

From the 2015 irrigation data, there were 209 water rights/permits that are diverting water from the BS:B for irrigation (Water Rights, 1980-2016). Annual reported irrigation data from the entire period of record, 1979 to 2015, is displayed in Figure 2, which shows the appropriation amount, and the reported pumpage.

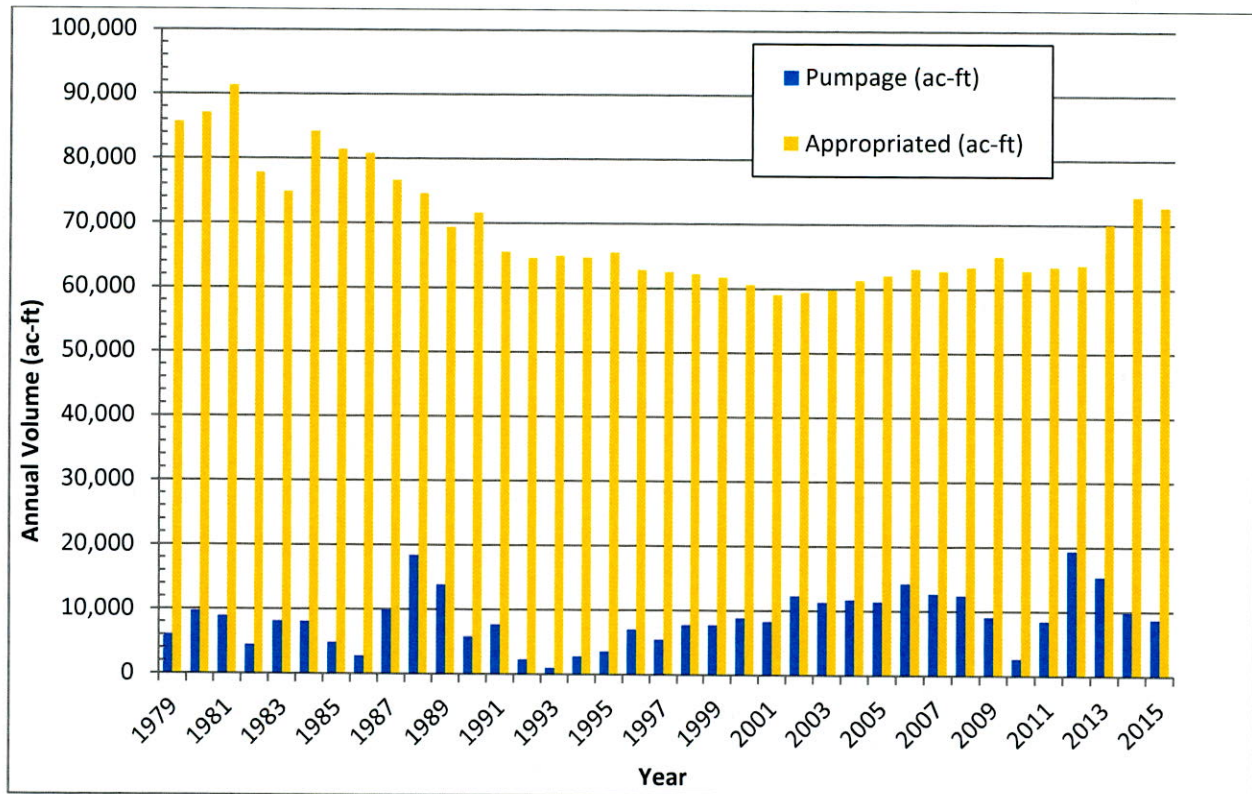


Figure 2: Reported annual irrigation data for the Big Sioux: Brookings (Water Rights, 1980-2016)

From 1979 to 2012, the average withdrawal for irrigation has been 8,586 ac-ft per year, but has varied from 1,043 ac-ft/yr to 19,483 ac-ft/yr. 2013 saw an increase in appropriations due to economic and climatic conditions. To account for the sudden increase in acreage in the computation of the estimated average annual withdrawal, a realistic, yet conservative estimate can be made. An estimate for management purposes would be to assume an application rate of one foot per acre per year. Permit applications since 2012, including this one, have added 5,823 acres, resulting in an additional estimated average annual withdrawal of 5,823 acre-ft. The total estimated average annual withdrawal for irrigation purposes is 14,409 ac-ft per year.

Hydrologic Budget

The estimated annual recharge to the Big Sioux: Brookings management unit is 107,000 acre feet per year, and the estimated annual discharge is 35,500 acre feet per year. The discharge is less than recharge, showing that there is a reasonable probability that unappropriated water is available in the Big Sioux: Brookings aquifer to support the proposed application.

Observation Well Data

The Water Rights Program monitors 79 observation wells completed in the Big Sioux: Brookings aquifer (Water Rights, 2017b). The nearest observation well is BG-75E, located approximately 1.3 miles to the northwest of the well location. Observation well BG-75E is representative of other nearby observation wells completed into the BS:B (Figure 3). In agreement with the other observation wells in the BS:B, the hydrograph shows that the potentiometric surface at BG-75E rises during wet periods, and declines during dry periods, indicating that the aquifer responds well to climatic conditions. By comparing the climatic trend with the other observation wells, the climatic trend masks the temporal effects of well withdrawals (Figure 3). The gradient between the nearby observation wells has remained consistent over the period of record, indicating that the shape of the potentiometric surface has been stable even though climatic conditions have changed throughout the period of record. The observation well data indicates that there is a reasonable probability that there is unappropriated water available from the Big Sioux: Brookings aquifer.

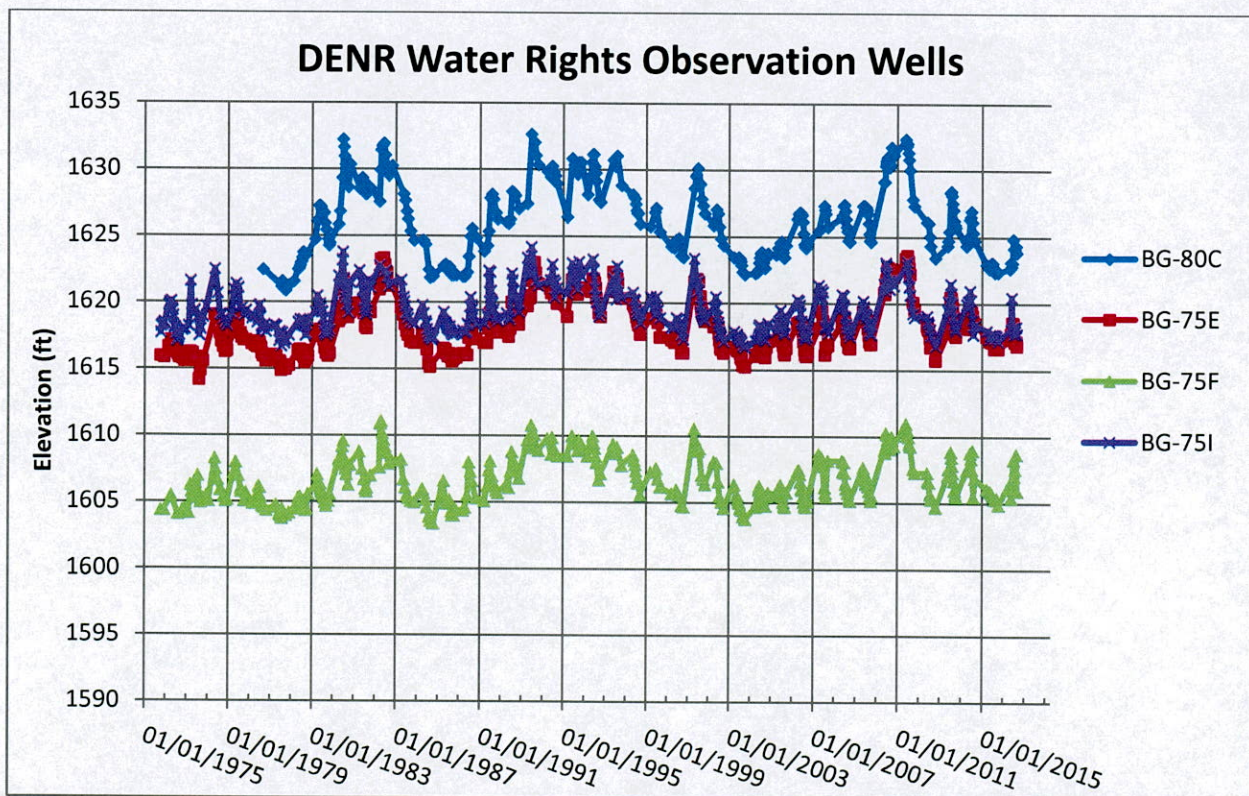


Figure 3: Hydrographs for Observation Wells BG-75E, BG-75F, BG-75I, and BG-80C (Water Rights, 2017b)

EXISTING WATER RIGHTS

The nearest existing water right/permit completed in the Big Sioux: Brookings aquifer is Water Right 4291-3, located ½ mile to the west, with a priority date of 06/14/1974. Water Right 4291-3 is permitted at a maximum diversion rate of 1.77 cfs for the irrigation of 124 acres in the NE ¼ Section 1, T111N-R51W. (Water Rights, 2017a). The city of Bruce, SD is located approximately 1 mile south, however the municipality is connected to the Brookings-Deuel Rural Water System and is not reliant on the BS:B aquifer in the immediate vicinity. Given the distance to this well and that the BS:B aquifer is unconfined in this area, the drawdown in nearby wells as a result of pumping is not expected to be significant. This permit, if approved, is not expected to adversely impact adequate wells in the area.

Conditions occur where withdrawal exceeds the average annual recharge. The saturated thickness of this thin aquifer could be reduced. 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.

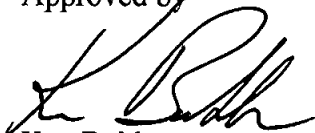
CONCLUSIONS

1. This application proposes to appropriate water from a well (42 feet deep) to be completed in the Brookings management unit of the Big Sioux aquifer.
2. There is a reasonable probability that unappropriated water is available from the Big Sioux: Brookings aquifer to supply the 120 acres.
3. There is a reasonable probability that the additional use from the existing well as proposed by this application will not adversely impact adequate wells for existing water rights and domestic use.



John Farmer
SD DENR – Water Rights Program

Approved by



Ken Buhler
SD DENR – Water Rights Program

REFERENCES

- Hamilton, L.J., 1989, Water Resources of Brookings and Kingsbury Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 88-4185, 87p.
- Hansen, H.S., 1988. Appraisal of the Water Resources of the Big Sioux Aquifer, Moody County, South Dakota. U.S. Geological Survey Water-Resources Investigations Report 87-4057.
- 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. and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota, and Iowa. Task 7: Ground-Water Recharge. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Koch, N.C., 1980. Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota. U.S. Geological Survey Water-Resources Investigations Report 80-100, 46p.
- Kume, J. 1985. Water Resources of Deuel and Hamlin Counties, South Dakota. U.S. Geological Survey Water-Resources Investigations Report 84-4069.
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- Water Rights. 1980-2016. "1979-2015 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2017a. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2017b. Well Completion Report Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2017c, "Observation Well Database", SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

No. 8277-3

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Application No. 8277-3, Haroldson Living Trust

ADDRESS: 20039 465th Avenue, Bruce SD

COUNTY: Brookings County

DATE: April 3, 2017

TELEPHONE:

RE: amount of water claimed.

I emailed Kyle Haroldson to inquire how they arrived at the amount of water claimed being 600 gpm. The statutory limit for irrigation of 120 acres is 1.71 cfs (770 gpm). Mr. Haroldson stated they are new at irrigation and believed they put down 600 gpm based on what the well driller told him. He requested the application be amended to the statutory limit of 1.71 cfs.

We had a brief discussion about once the system is built, a Water Rights person will conduct an investigation for the purpose of licensing the water right for the amount that is developed. If the permit is obtained and a diversion less than 770 gpm is developed, the license will be issued for the amount developed. If an amount greater than the permitted amount is developed, they would need to go through the permitting process again for the increase in diversion authority above the permitted amount.

NAME: Eric Hemlund

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

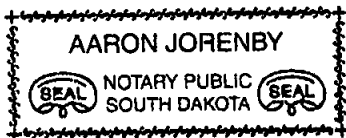
Leg# 583 Application No. 8277-3 to Appropriate Water

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

June 9, 2017

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:

Twenty-Six Dollars and Thirteen Cents \$26.13



June

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires February 22, 2020.

Legal 583, 1x, 6/9

NOTICE OF APPLICATION NO. 8277-3 to

Appropriate Water

Notice is given that Haroldson Living Trust, c/o Gaylord Haroldson, Trustee, 20039 465th Ave, Bruce SD 57220 has filed an application for a water permit to appropriate 1.71 cubic feet of water per second from one well to be completed into the Big Sioux:Brookings Aquifer (42 feet deep) located in the S 1/2 NW 1/4 Section 6 for irrigation of 120 acres located in the S 1/2 NW 1/4, NE 1/4 NW 1/4 Section 6; all in T111N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of

Application No. 8277-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed

by either an interested person or the applicant must be filed by June 19, 2017.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$26.13.

A handwritten signature in black ink, appearing to be "KJ" or similar, written over a horizontal line.

12 day of

2017

A large handwritten signature in black ink, appearing to be "AG", written over a horizontal line.

RECEIVED

JUN 23 2017

WATER RIGHTS PROGRAM

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, May 30, 2017 10:19 AM
To: registerclassifieds (registerclassifieds@brookingsregister.com)
Subject: 8277-3, Haroldson Living Trust
Attachments: 8277-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on June 9, 2017.

Haroldson Living Trust, c/o Garylord Haroldson, 20039 465th Ave, Bruce SD 57220 (832 942-2820 or cell 605 695-2313) 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

SD DENR, Water Rights Program
(605) 773-3352





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

**NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER(S) RIGHT AWAY.**

May 30, 2017

Haroldson Living Trust
Gaylord Haroldson
20039 465th Ave
Bruce SD 57220

Dear Mr. Haroldson:

Water Permit Application No. 8277-3 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(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8277-3 to Appropriate Water

Notice is given that Haroldson Living Trust, c/o Gaylord Haroldson, Trustee, 20039 465th Ave, Bruce SD 57220 has filed an application for a water permit to appropriate 1.71 cubic feet of water per second from one well to be completed into the Big Sioux:Brookings Aquifer (42 feet deep) located in the S 1/2 NW 1/4 Section 6 for irrigation of 120 acres located in the S 1/2 NW 1/4, NE 1/4 NW 1/4 Section 6; all in T111N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8277-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by June 19, 2017.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

JUN 30 2017

Haroldson Living Trust
c/o Gaylord Haroldson
20039 465th Ave
Bruce SD 57220

Dear Mr. Haroldson:

Enclosed is Water Permit No. 8277-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

Sincerely,


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

enclosures



DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 20, 2022

NOTICE

TO: HAROLDSON LIVING TRUST, GAYLORD HAROLDSON, 20039 465TH AVE, BRUCE, SD 57220

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2021 Irrigation Questionnaire(s)

Our records indicate your 2021 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 8277-3. The request for the Questionnaire was dated October 22, 2021. The Water Management Board has directed that owners of water permits who have not submitted the 2021 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 8277-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 2, 2022 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 8277-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 2, 2022** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: ARLYFH**

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

February 2, 2022

8277-3

Gaylord Haroldson
Haroldson Living Trust
20039 465th Ave
Bruce SD 57220

Dear Mr. Haroldson:

I am writing to acknowledge receipt of your 2021 irrigation questionnaire.

You may disregard the January 20, 2022, "Notice" concerning reporting requirements for Water Permit No. 8277-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us