

WATER PERMIT NO. 7925-3

Name of Applicant: Byron Hendrickson

Address: 45992 195th St, Estelline SD 57234 Phone: 605 873-2678

Amount of Water Claimed: 2.22 cfs Total Acres: 180 acres

Source of Water Supply: groundwater (two wells)

Water to be used for: irrigation County: Hamlin

Type of Waste Disposal System:

Location: 6 miles west of Estelline

PRIORITY Date Received: 11-15-13 Application/License Fee: \$ 1050

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

Remarks:

Diversion Point: NW 1/4 SW 1/4 Sec 30-T113N-
R51W and NE 1/4 SE 1/4 Sec 25-T113N-R52W

Land to be Irrigated: W 1/2 SW 1/4 Sec 30-
T113N-R51W and SE 1/4, S 1/2 NE 1/4 Sec 25-
T113N-R52W

Depth of Well: 60 feet deep

Well Driller: Kaiser Well Drilling

Remarks:

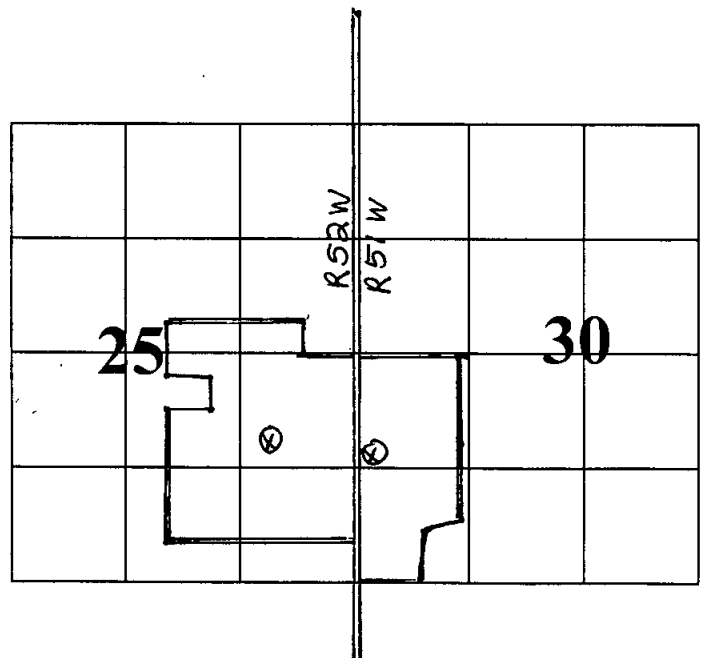
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 11-15-13

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



Wave 690-9013

Mail to:
PMB 2020
DENR - Water Rights
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

No. 7925-3 (office use only)
Hydrologic Unit 10170202
Basin Sioux River 605-873-2475
Newspaper Estelline Journal Box 159 57234
Brookings Register Box 177 57006 605-692-6271

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NOV 15 2013
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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 Byron Hendrickson
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent _____
(name and complete address if different than above name)

Mailing Address 45992 195th St. Estelline SD 57234
(Address) (City) (State) (Zip Code)

Home Phone 873-2678 Cell _____ Email _____

2. Amount of water claimed 2.22*CFS or 1000**GPM ***AF Total Acreage 180A
(*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 west side and south corner of the NW 1/4 of the SW 1/4 of Sec 30 -
(NE 1/4 SE 1/4) (example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
#2 1130' from east side, 1190' from south side of SE 1/4 Sec 25 113N 52W County Hamlin T113N-R51W

5. County or counties where water will be used Hamlin

6. Annual period during which water is to be used May 1 - Sept 30

7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

#	Land Description	Acres	#	Land Description	Acres
1	NW 1/4 of the SW 1/4 Sec 30 113N 51W	38	2	SW 1/4 of the SE 1/4 of Sec 25 113N 52W	28
	SW 1/4 of the SW 1/4 Sec 30 113N 51W	28		NW 1/4 of the SE 1/4 of Sec 25 113N 52W	13
				NE 1/4 of the SE 1/4 of Sec 25 113N 52W	35
				SE 1/4 of the SE 1/4 of Sec 25 113N 52W	28
				SE 1/4 of the NE 1/4 of Sec 25 113N 52W	5
				SW 1/4 of the NE 1/4 of Sec 25 113N 52W	5

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

Byron Hendrickson Byron Hendrickson, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

**SOUTH DAKOTA
WATER PERMIT NO. 7925-3**

Date of first receipt of application November 15, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7925-3 to Byron Hendrickson, 45992 195th St, Estelline SD 57234 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. 7925-3 appropriates 2.22 cubic feet of water per second from two wells to be completed into the Big Sioux:Brookings Aquifer (60 feet deep) located in the NW 1/4 SW 1/4 Section 30-T113N-R51W and NE 1/4 SE 1/4 Section 25-T113N-R52W for irrigation of 180 acres located in the W 1/2 SW 1/4 Section 30-T113N-R51W and the SE 1/4, S 1/2 NE 1/4 Section 25-T113N-R52W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is November 15, 2013.
4. The date of approval of Permit No. 7925-3 is January 27, 2014.
5. One-fifth of the construction is to be completed on or before July 27, 2016.
6. All construction is to be completed on or before January 27, 2019.
7. Water is to be put to beneficial use on or before January 27, 2023.
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 wells 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 wells authorized by Permit No. 7925-3 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, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

FEB 20 2014

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 2 Have test holes been drilled ☒ Yes ☐ No Drilled by Kaiser
(if yes, please provide copies of logs)
- b) If existing wells, how many Provide copy of log(s), if available. Drilled by
- c) Well Depth 60 Depth to Top of Water Bearing Material 30 Depth to Water from Surface 21.6
- d) Distance to nearest existing domestic well:
- On applicant's property 1300 On property owned by others none

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field)
- b) System Capacity (gallons) Year Constructed
- c) Connected to the City of Sanitary System

3. Dugout Information

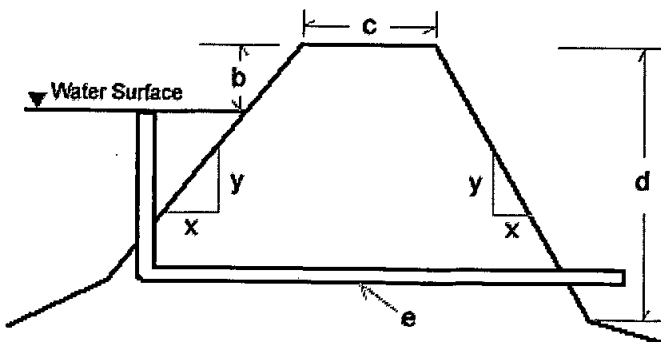
- a) Surface Dimensions Depth
- b) Depth to water (ground surface to water level)

4. Water Storage Dams

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

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

- b) Freeboard
- c) Crest Width
Crest Length
- d) Height
- e) Primary Outlet Capacity
If pipe, diameter
- f) Secondary Spillway Capacity
Spillway Width
- g) X & Y Slope (e.g. 3 to 1 is a typical slope)
Upstream
Downstream
- h) Surface Area of Impoundment
- i) Storage Acre Feet
- j) Drainage Area Above Dam Acres





PPLS:30_113N_51W

Data use subject to license.

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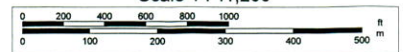


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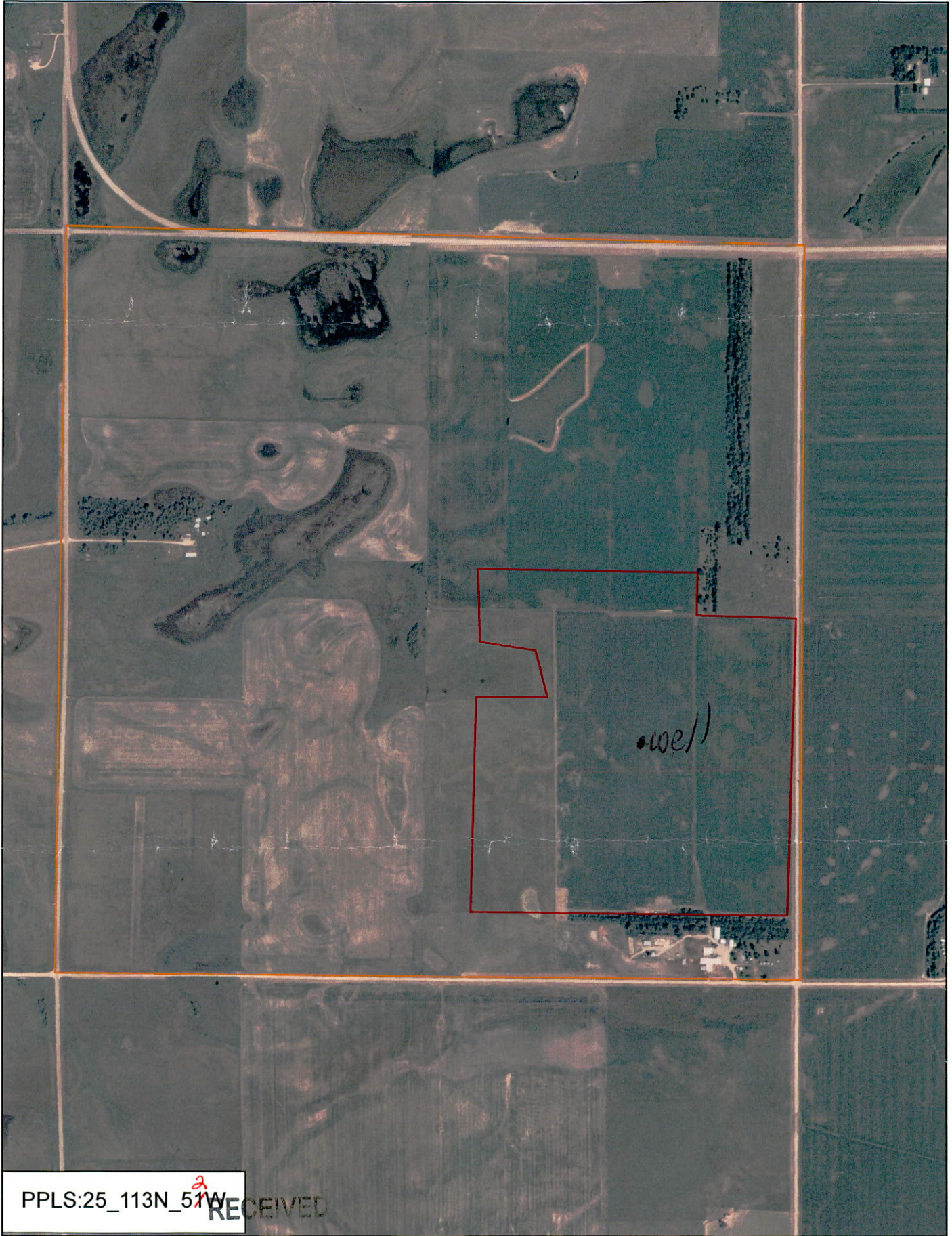
WATER RIGHTS
PROGRAM

Scale 1 : 11,200



1" = 933.3 ft

Data Zoom 14-2



PPLS:25_113N_51W

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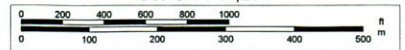
NOV 15 2013

WATER RIGHTS
PROGRAM



1130

Scale 1 : 11,200



1" = 933.3 ft

Data Zoom 14-2

SD EForm - 1621LD V1

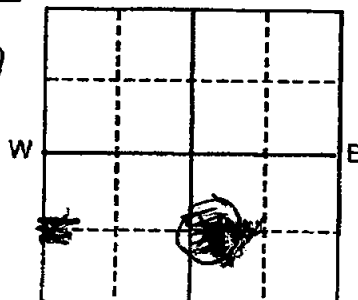
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 SE 1/4 Sec 25 Twp 113N Rg 52WCounty HAMLIN

North

Please mark well location with an "X"



Well Completion Date

10-28-13

1 Mile

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

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☒ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

ROTARY DRILL

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
40.0 LB/FT	3.00 IN	0.0 FT	70.0 FT	6.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Grt Well DF	3	54.0 Lb/gal	0.0 Ft	70.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure _____

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 3.00 Inches Length 10.0 Feet
 Material PVC
 Slot Size 80 Set From 70.0 Feet to 80.0 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 analysis _____
Well Owner: BYRON HENDRICKSON

Business Name: _____

Address: 45992 195TH STCity, State, Zip: ESTELLINE SD 57234

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	1
YELLOW MIXED GRAVEL	1	10
YELLOW CLAY	10	13
YELLOW MIXED GRAVEL	13	20
BLUE CLAY	20	25
YELLOW GRAVEL MEDIUM	25	30
BLUE CLAY	30	31
YELLOW MEDIUM	31	50
YELLOW FINE SAND	50	60

STATIC WATER LEVEL

21'6"

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 80 GPM ++
☐ Bailed

☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

BLUE CLAY 60-70
YELLOW MED ROCKS 70-80

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WATER RIGHTS
PROGRAMThis 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: _____

Byron D HendricksonDate: 11-5-13

SD EForm - 1621LD V1

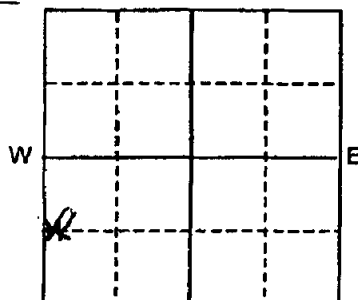
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location W ¼ SW ¼ Sec 30 Twp 113N Rg 51W

County HAMLIN

North

Please mark well
location with an "X"

Well Completion Date

10-28-13

1 Mile

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

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☒ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

ROTARY DRILL

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
40.0 LB/FT	3.00 IN	0.0 FT	60.0 FT	6.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Grt Well DF	3	54.0 Lb/gal	0.0 Ft	60.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

SCREEN:

☐ Perforated pipe ☒ Manufactured

Diameter 3.00 Inches Length 10.0 Feet

Material PVC

Slot Size 80 Set From 50.0 Feet to 60.0 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 analysis

Well Owner: BYRON HENDRICKSON

Business Name:

Address: 45992 195TH ST

City, State, Zip: ESTELLINE SD 57234

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	1
YELLOW MIXED GRAVEL	1	25
YELLOW CLAY	25	27
BLUE CLAY	27	30
YELLOW MEDIUM GRAVEL	30	37
GREY MEDIUM	37	45
GREY COURSE MIXED CLAY	45	50
MEDIUM, GREY GRAVEL	50	60
BLUE CLAY	60	70

STATIC WATER LEVEL 29.6 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 70 GPM ++
☐ Bailed
☐ Other

Pumping Level Below Land Surface

Ft. After Hrs. pumped GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Sent 11-6

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NOV 15 2013

WATER RIGHTS
PROGRAM

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:

Byron O Hendrickson

Date: 11-5-13

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 11/15, 20 13

RECEIVED OF Byron D Hendrickson 45992 195th St Estelline SD 57234

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

Fee for Application for Permit No. <u>7925-3</u> to Appropriate Water, to construct and to put water to beneficial use	850	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7925-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	1050 00

No. **06486**

By Jaime Goodman
Chief Engineer



**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. 7925-3, Byron Hendrickson**

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. 7925-3, Byron Hendrickson, 45992 195th Street, Estelline SD 57234.

The Chief Engineer is recommending APPROVAL of Application No. 7925-3 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 wells 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 wells authorized by Permit No. 7925-3 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
January 6, 2014

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7925-3
BYRON HENDRICKSON
JANUARY 6, 2014

Water Permit Application No. 7925-3 proposes to appropriate water at a maximum diversion rate of 2.22 cubic feet of water per second (cfs) from two wells to be completed into the Big Sioux: Brookings aquifer. The wells are expected to be 60 feet deep and are to be located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 30-T113N-R51W and NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25-T113N-R52W for the irrigation of 180 acres located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 30-T113N-R51W and NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25-T113N-R52W in Hamlin County.

AQUIFER: Brookings management unit of the Big Sioux aquifer (BS: B)

AQUIFER CHARACTERISTICS:

The Big Sioux: Brookings aquifer is a predominantly surficial outwash aquifer that is primarily under water table conditions (Koch, 1980). The Big Sioux: Brookings aquifer extends south from Hamlin County into Brookings County, and east into Deuel County. The aquifer underlies approximately 191,100 acres and contains an estimated 642,230 ac-ft of recoverable water in storage (Hedges et. al, 1982). The aquifer is hydraulically connected to area lakes, streams, and the Big Sioux River (Kume, 1985). The aquifer is also connected to the Big Sioux: North in northern Hamlin County and the Big Sioux: Moody in central Moody County (Hedges et. al, 1982). Kume (1985) estimated that the Big Sioux: Brookings has an average thickness of 30 feet, and wells completed in the aquifer could yield in excess of 1,000 gallons per minute of water that is suitable for irrigation.

The test hole logs submitted with this application identified the Big Sioux: Brookings aquifer from ground surface to 60 feet below grade. The test hole in Section 25 had a static water level of 21.5 feet and the test hole in Section 30 had a static water level of 29.6 feet below grade in October 2013.

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

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for this applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate water from the Big Sioux: Brookings aquifer. Actual water use, if this application is approved, will likely be less than 360 acre-feet annually (ac-ft/yr). The probability of unappropriated water available from the aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the

quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source.” If the source of the water is older or lower than the Greenhorn Formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. In this case, the aquifer is not stratigraphically lower than the Greenhorn Formation and the applicant is not a public water system.

Hydrologic Budget:

Recharge:

Recharge to the Big Sioux: Brookings aquifer is by infiltration of precipitation, and seepage from the Big Sioux River and its tributaries (Kume, 1985). Koch (1980) estimated a recharge rate of 6.57 inches per year (in/yr), and Hedges and others (1985) estimated a recharge rate of 4 in/yr. That equates to a range of 63,700 to 104,627 ac-ft/yr recharge to the aquifer. This is not to suggest that the entire volume of recharge or of recoverable water in the aquifer is available at every point in the aquifer, but to demonstrate that in general the Big Sioux: Brookings aquifer is readily recharged.

Discharge:

The Big Sioux: Brookings aquifer discharges through seepage to the Big Sioux River and its tributaries during periods of low flow and stage, evapotranspiration, and well withdrawals (Koch, 1980). There are 251 water rights/permits appropriating water and 10 future use permits reserving water from the Big Sioux: Brookings aquifer (Water Rights, 2013b). The amount of water that can be expected to be withdrawn through water rights/permits authorizing water use for non-irrigation purposes at the current appropriation level can be estimated by assuming: 1) water rights/permits limited by an annual volume will pump the entire volume appropriated, 2) water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and 3) future use permits can be fully developed. The estimated average annual withdrawal by non-irrigation appropriations including future use permits from the Big Sioux: Brookings aquifer is 19,367 ac-ft (Water Rights, 2013b). Note that several of the municipalities with water rights/permits authorizing the withdrawal of water from the Big Sioux: Brookings aquifer only use their water rights/permits as backup to rural water (Friedeman, 2013).

The withdrawal for domestic use from the Big Sioux: Brookings is not significant to the hydrologic budget of the aquifer, especially since many of the domestic wells are no longer used as primary sources of water since the introduction of rural water systems to the area. Table 1 shows the irrigation withdrawal from the entire Big Sioux: Brookings aquifer. The average annual irrigation withdrawals from the Big Sioux: Brookings aquifer is 8,608.5 ac-ft (Water Rights, 1979-2013).

Hydrologic Budget:

Using Hedges and others (1985) recharge estimate there is approximately 35,725 ac-ft/yr of recharge that is unappropriated from the entire Big Sioux: Brookings aquifer. Therefore, there is a reasonable probability that there is unappropriated water available for this proposed appropriation.

Year	No. of Permits Reporting	Appropriation (ac-ft)	Pumpage (ac-ft)
2012	177	63694.4	19482.51
2011	174	63494.4	8527.61
2010	172	62966.4	2713.39
2009	174	65098.4	9172.9
2008	166	62761.8	12505.85
2007	164	62374.8	12730.13
2006	161	61075.8	14325.04
2005	159	61435.8	11513.48
2004	156	60695.8	11809.91
2003	149	58970.8	11380.47
2002	149	59186.8	12410.94
2001	149	59312.8	8384.81
2000	153	60799.8	8933.72
1999	155	62181.3	7841.04
1998	157	63306.2	8109.71
1997	153	62281.7	5650
1996	154	62575.2	7220.95
1995	161	62961.2	3862.25
1994	160	64395.2	2854.62
1993	162	64963.7	1042.9
1992	162	64603.7	2331.6
1991	165	65534.97	7771.74
1990	175	71616.95	5862.92
1989	166	69391.27	13930.7
1988	167	74615.27	18521.4
1987	171	76624.07	10015
1986	179	80788.57	2854.7
1985	181	81385.57	4951.4
1984	188	84188.07	8177.6
1983	161	74854.57	8227.46
1982	155	77754.57	4551.86
1981	197	91051	9040
1980	187	87093	9837
1979	184	85701	6144
Min	149	58970.8	1042.9
Max	197	91051	19482.5
Avg	166.0	68521.6	8608.5

Table 1- Irrigation water use from the entire Big Sioux: Brookings aquifer (Water Rights, 1979-2013)

Observation Well Data:

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

The DENR-Water Rights Program monitors 80 observation wells completed into the Big Sioux: Brookings aquifer (Water Rights, 2013a). Water levels in the observation wells show response to climatic conditions. The water levels rise (recharge) during wet years and gradually decline during dry years. The hydrographs show the effects of pumping, but it does not appear to be significant over the period of record. The climatic effects on water level mask the temporal impacts of well withdrawal. Therefore, recharge to and natural discharge from the Big Sioux: Brookings aquifer significantly exceeds pumping. Recognizing that natural discharge can be

captured for pumping, there is a reasonable probability that unappropriated water is available for these proposed appropriations. The nearest of the observation wells to the proposed well site are shown in Figure 1, a map of the area around the proposed well sites. The hydrographs for observation wells HN-77G, and HN-76A, are shown in Figures 2 and 3, respectively. The hydrographs, in general, show similar hydrologic conditions to the other observation wells throughout the aquifer and are representative of the aquifer.

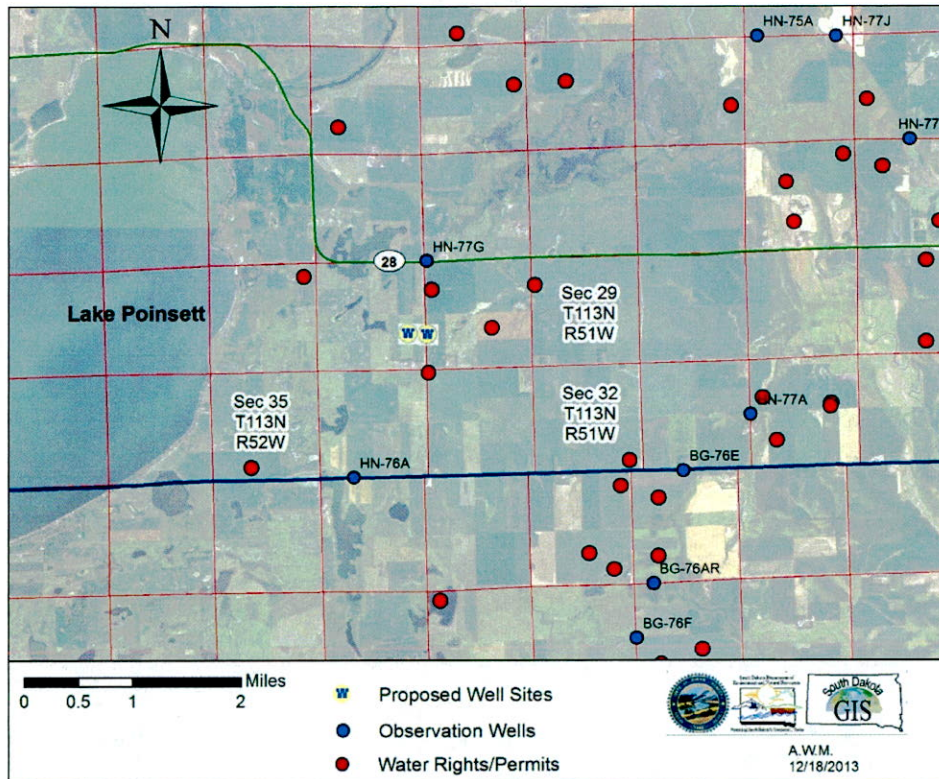


Figure 1- Map of the area around Application No. 7925-3 (Water Rights, 2013a)

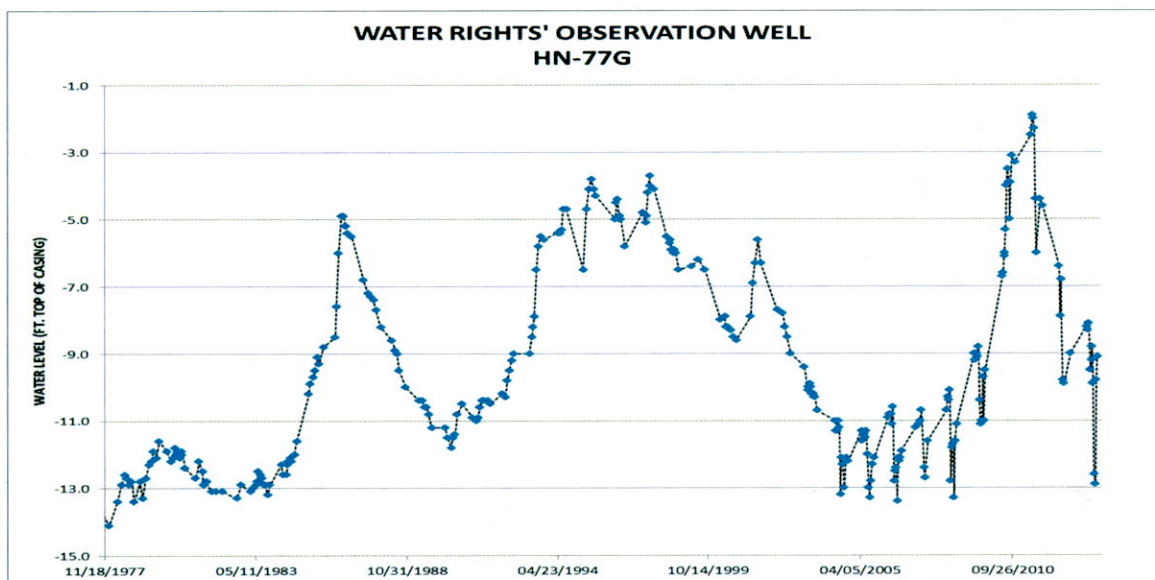


Figure 2- Hydrograph of DENR-Water Rights' observation well HN-77G (Water Rights, 2013a)

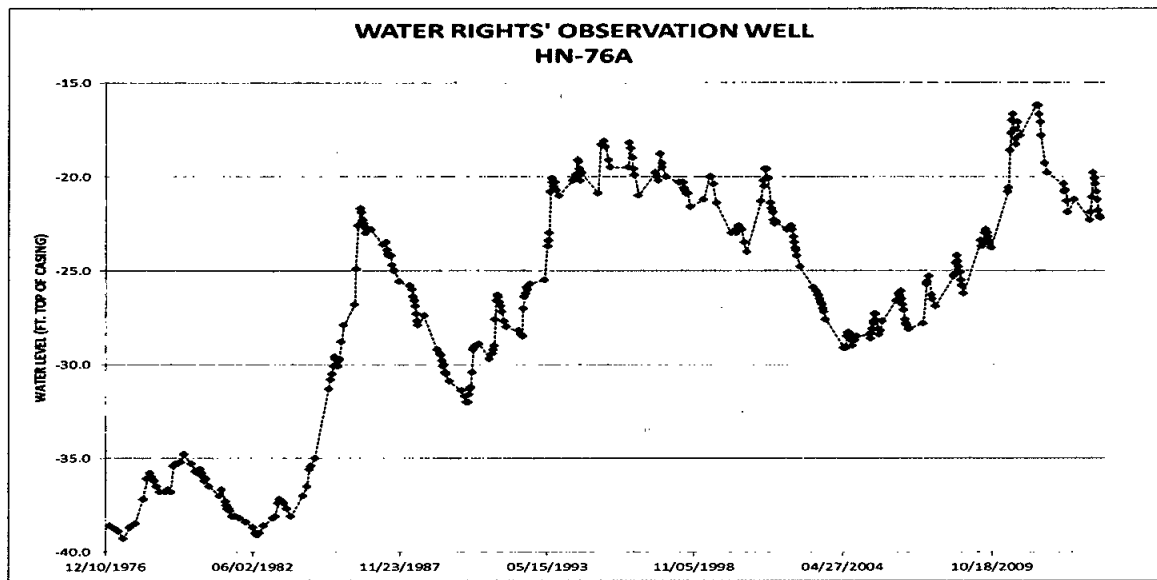


Figure 3- Hydrograph of DENR-Water Rights' observation well HN-76A (Water Rights, 2013a)

EXISTING WATER RIGHTS:

There are four water rights/permits within approximately one mile of the proposed well sites (Water Rights, 2013b). These water rights/permits are shown in Table 2 and in Figure 1. There are also a number of domestic wells on file with the SD DENR-Water Rights Program within approximately one mile of the proposed well sites (Water Rights, 2013c). The nearest domestic wells on file with the SD DENR-Water Rights Program are approximately 0.3 miles south of the proposed well sites. The nearest well authorized by a water right/permit, Water Right No. 6409-3, is approximately 0.5 miles south of the proposed well site

Permit No.	Name	Status	Type	CFS	Acres
6409-3	Ronald Jongeling	LC	IRR	1.78	132
6411-3	Brad Jongeling	LC	IRR	1.78	132
6412-3	Todd Jongeling	LC	IRR	1.78	132
7506-3	Larry or Steve Knutson	PE	IRR	1.78	152
LC= Water Right, PE= Water Permit, IRR= Irrigation					

Table 2- Water Rights/Permits within approximately one mile of proposed well site (Water Rights, 2013b)

In the past, the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown may occur. Since the aquifer is under unconfined conditions drawdown due to pumping would not be significant far from the proposed well sites. There has also been a history of large capacity wells in the area as evidenced by the large number of irrigation wells in the area. Therefore, nearby adequate wells are not expected to be adversely or unlawfully impaired by the proposed diversion.

The close proximity and concentration of high capacity wells pumping from this relatively thin aquifer could lead to water level declines being compounded and magnified. While the withdrawals would not exceed recharge of the aquifer as a whole, this cumulative impact of withdrawals could lead to a reduction of water levels 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 his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

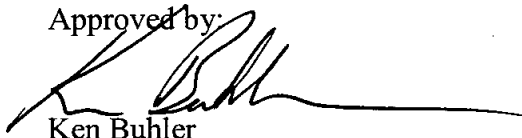
CONCLUSIONS:

1. Water Permit Application No. 7925-3 proposes to appropriate water at a maximum diversion rate of 2.22 cfs from the Big Sioux: Brookings aquifer for the irrigation of 180 acres.
2. There is a reasonable probability that unappropriated water is available for this proposed appropriation.
3. There is a reasonable probability that the diversion rate requested by this application can be made without adversely impacting existing water rights/permits and domestic users.



Adam Mathiowetz
SD DENR-Water Rights Program

Approved by:



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Friedeman, B. Personal Communication. SD DENR-Drinking Water Program. July 9, 2013.
- 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; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 1982. Evaluation of Ground-water Resources in Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Koch, N.C. 1980. Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota. Water-Resources Investigations Report 80-100. USGS, Huron, South Dakota.
- Kume, J. 1985. Water Resources of Deuel and Hamlin Counties, South Dakota. Water-Resources Investigations Report 84-4069. USGS, Huron, South Dakota.
- Water Rights. 1979-2013. "1979-2012 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD.
- Water Rights. 2013a. Observation Well Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013b. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013c. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

RECEIVED

JAN 23 2014

WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Hamlin) SS

I, LeAnne Dufek

certify that the attached printed Notice was
taken

from the Estelline Journal

printed and published in Estelline

County of Hamlin and

state of South Dakota. The notice was
published

in the newspaper on the following date:

Jan. 15, 2014

Cost of Printing \$23.10

LeAnne Dufek
(Signature)

Owner
(Title)

1-17-14
(Date Signed)

NOTICE OF APPLICATION NO.
7925-3 TO APPROPRIATE WATER

Notice is given that Byron Hendrickson, 45992 195th St, Estelline SD 57234 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second from two wells to be completed into the Big Sioux-Brookings Aquifer (60 feet deep) located in the NW 1/4 SW 1/4 Section 30-T113N-R51W and NE 1/4 SE 1/4 Section 25-T113N-R52W for irrigation of 180 acres located in the W 1/2 SW 1/4 Section 30-T113N-R51W and the SE 1/4, S 1/2 NE 1/4 Section 25-T113N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7925-3 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. 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.

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 January 27, 2014.

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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pimer, Secretary, Department of Environment and Natural Resources.

Published Jan. 15, 2014, at total cost of \$23.10.

RECEIVED

JAN 21 2014

WATER RIGHTS
PROGRAM

10/

Affidavit of Publication

State of South Dakota

Exhibit "A"

ss

County of Brookings

Jennifer Milligan 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

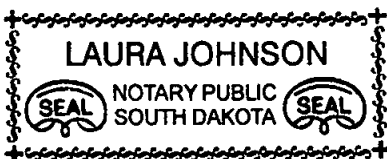
Leg#717 Notice on Application #7925-3

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

January 15, 2014

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-four dollars and seventeen cents \$24.17



[Signature]

14th day of

January

2014

[Signature]

Laura Johnson

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires August 3, 2017.

Legal 717, 1x, 1/15
NOTICE OF APPLICATION NO. 7925-3 to
Appropriate Water

Notice is given that Byron Hendrickson, 45992 195th St, Estelline SD 57234 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second from two wells to be completed into the Big Sioux-Brookings Aquifer (60 feet deep) located in the NW 1/4 SW 1/4 Section 30-T113N-R51W and NE 1/4 SE 1/4 Section 25-T113N-R52W for irrigation of 180 acres located in the W 1/2 SW 1/4 Section 30-T113N-R51W and the SE 1/4, S 1/2 NE 1/4 Section 25-T113N-R52W. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7925-3 because 1) unappropri-

ated 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. 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. 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 January 27, 2014. 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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$24.17.



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



January 6, 2014

Estelline Journal
PO Box 159
Estelline SD 57234

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7925-3 to Appropriate Water. Please publish the notice once on January 15, 2014. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Byron Hendrickson, 45992 195th St, Estelline SD 57234 (Ph # 605-873-2678).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



January 6, 2014

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

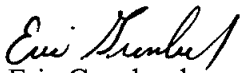
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The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Byron Hendrickson, 45992 195th St, Estelline SD 57234 (Ph # 605-873-2678).

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Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



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 RIGHT AWAY.**

January 6, 2014

Byron Hendrickson
45992 195th St
Estelline SD 57234

Dear Mr. Hendrickson:

Water Permit Application No. 7925-3 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) and the Estelline Journal printed at Estelline SD (Ph # 605-873-2475). 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.

Instruction to Newspaper - Publish the Notice on January 15, 2014. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7925-3 to Appropriate Water

Notice is given that Byron Hendrickson, 45992 195th St, Estelline SD 57234 has filed an application for a water permit to appropriate 2.22 cubic feet of water per second from two wells to be completed into the Big Sioux:Brookings Aquifer (60 feet deep) located in the NW 1/4 SW 1/4 Section 30-T113N-R51W and NE 1/4 SE 1/4 Section 25-T113N-R52W for irrigation of 180 acres located in the W 1/2 SW 1/4 Section 30-T113N-R51W and the SE 1/4, S 1/2 NE 1/4 Section 25-T113N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7925-3 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. 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.

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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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. 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



FEB 20 2014

Byron Hendrickson
45992 195th St
Estelline SD 57234

Dear Mr. Hendrickson:

Enclosed is Water Permit No. 7925-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

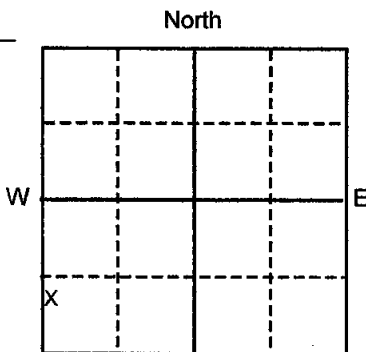
7925-3 SD EForm - 1621LD V1

11-02

Location W 1/4 SW 1/4 Sec 30 Twp 113N Rg 51W

County HAMLIN

Please mark well location with an "X"



Well Completion Date

8-2014

← 1 Mile →

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

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☒ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

ROTARY DRILL

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
40.0 LB/FT	16.00 IN	0.0 FT	45.0 FT	24.00 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Grt Well DF	17	54.0 Lb/gal	0.0 Ft	45.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

TREMIE

SCREEN:

☐ Perforated pipe ☒ Manufactured

Diameter 16.00 Inches Length 15.0 Feet

Material SS

Slot Size 80 Set From 45.0 Feet to 60.0 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 analysis

Well Owner: BYRON HENDRICKSON

Business Name: _____

Address: 45992 195TH ST

City, State, Zip: ESTELLINE SD 57234

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	1
YELLOW MIXED GRAVEL	1	25
YELLOW CLAY	25	27
BLUE CLAY	27	30
YELLOW MEDIUM GRAVEL	30	37
GREY MEDIUM	37	45
GREY COURSE MIXED CLAY	45	50
MEDIUM, GREY GRAVEL	50	60
BLUE CLAY	60	70

STATIC WATER LEVEL 29.0 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: SUBMERSIBLE
☐ Bailed
☐ Other

Pumping Level Below Land Surface

42.0 Ft. After 6.0 Hrs. pumped 700.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

GRUNDFOS 625S400 6" W/ 40HP MOTOR

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: _____

RECEIVED

JAN 3 2015

WATER RIGHTS PROGRAM

Date: _____



7925-3
DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

January 15, 2016

NOTICE

TO: BYRON HENDRICKSON, 45992 195TH ST, ESTELLINE, SD 57234

FROM: Ron Duvall, Natural Resources Engineer
for Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2015 Irrigation Questionnaire(s)

Our records indicate your 2015 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7925-3. The request for the Questionnaire was dated October 23, 2015. The Water Management Board has directed that owners of water permits who have not submitted the 2015 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) 7925-3 qualification:

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

The hearing will be held at **Thursday, March 3, 2016 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) 7925-3 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 3, 2016** 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: <http://denr.sd.gov/iq.aspx>

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 ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

February 9, 2016

7925-3

Byron Hendrickson
45992 195th St
Estelline SD 57234

Dear Mr. Hendrickson:

I am writing to acknowledge receipt of your 2015 irrigation questionnaire.

You may disregard the January 15, 2016, "Notice" concerning reporting requirements for Water Permit No. 7925-3. 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
email: genny.mcmath@state.sd.us



7925-3
DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

January 20, 2017

NOTICE

TO: BYRON HENDRICKSON, 45992 195TH ST, ESTELLINE, SD 57234
FROM: Ron Duvall, Natural Resources Engineer
for Jeanne Goodman, Chief Engineer
Water Rights Program
SUBJECT: Reporting Requirement for 2016 Irrigation Questionnaire(s)

Our records indicate your 2016 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7925-3. The request for the Questionnaire was dated October 21, 2016. The Water Management Board has directed that owners of water permits who have not submitted the 2016 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) 7925-3 qualification:

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

The hearing will be held at **Wednesday, March 1, 2017 at 11:00 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) 7925-3 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 1, 2017** 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: <http://denr.sd.gov/iq.aspx>

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 ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

February 7, 2017

7925-3

Byron Hendrickson
45992 195th St
Estelline SD 57234

Dear Mr. Hendrickson:

I am writing to acknowledge receipt of your 2016 irrigation questionnaire.

You may disregard the January 20, 2017, "Notice" concerning reporting requirements for Water Permit No. 7925-3. 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
email: genny.mcmath@state.sd.us

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7925-3

I have this day, April 27, 2022, made a thorough examination of the water use system constructed by Byron Hendrickson 45992 195th St, Estelline, SD 57234 of Permit No. 7925-3, bearing the priority of November 15, 2013 authorizing the diversion of 2.22 cu. ft. per second of the waters of the Big Sioux-Brookings Aquifer for irrigation purposes, in Hamlin County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Kaiser Well Drilling Inc
- 2) No. of Wells 1
- 3) Depth 60 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 16 inches
- 2) Length 45 feet
- 3) Type Plastic

Screen:

- 1) Type Stainless steel
- 2) Length 15 feet
- 3) Static water level 29 feet

Pump:

- 1) Make Submersible
- 2) Model & Size unknown
- 3) Capacity 600 GPM

Motor:

- 1) Make Grundfos
- 2) Model 625S400
- 3) Horsepower rating 40 hp

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

- 1) Type above ground aluminum
- 2) Size 6 inches
- 3) Length 40 feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 1300 feet
- 3) Number of towers 7
- 4) End gun Y
- 5) Capacity 600 GPM

Chemigation Equipment: None

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y
- 3) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: **WELL LOCATION:**
From the SW corner Sec 30 T113N R51W, 1430 ft N & 35 ft E, Lat 44.56189 Long -97.00693 (NW ¼ SW ¼).
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:

All land in Sec 30 T113N R51W

NW ¼ SW ¼ 37.0 acres

NE ¼ SW ¼ 2.0 acres

SE ¼ SW ¼ 1.5 acres

SW ¼ SW ¼ 29.5 acres

comprising a total of 70 acres of land and the license should be issued for 1.00 cfs

3. All structures, wells and lands on map Y

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

The irrigated acreage was determined with the aid of FSA imagery and ArcMAP software.

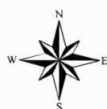
There are only 70 acres being currently irrigated and that is in Section 30. The proposed irrigation development in Section 25 has not occurred. Mr. Hendrickson was advised that a part of the permitted acres could be terminated due to incomplete development.

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



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: April 29, 2022



0 0.05 0.1 0.2 0.3 0.4 Miles



Darrell DeBoer
Water Right Inspector
DANR-Water Rights Program

Licensing of Acreage Outside of Permitted Area

NAME: Bryon Hendrickson

ADDRESS: 45992 195th St, Estelline SD 57234

DATE: June 1, 2022

COUNTY: Hamlin

AUTHORITY

Pursuant to SDCL 46-5-30.5, acreage developed for irrigation outside of the area described on the permit may be licensed provided the following conditions are met:

NO INCREASE IN PERMITTED ACREAGE OR WATER APPROPRIATED:

The acreage developed for irrigation is 70 acres as compared to 180 acres authorized by the permit.

UNPERMITTED ACREAGE:

- **Contiguous to Permitted Acreage**

The developed acres are in the E ½ SE ¼ of Section 30 T113N-R51W which are immediately adjacent to the authorized acres.

- **Owned by Same Property Owner**

Bryon Hendrickson is listed as owner of all the property involved.

- **Developed Prior to Expiration of Construction Period**

Yes, the acres were developed prior to January 27, 2019.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the 3.5 acre area in the E ½ SE ¼ of Section 30 T113N-R51W be included in the water license.



Mark D Rath, Natural Resources Engineer
Water Rights Program

The Chief Engineer makes a finding pursuant to SDCL 46-5-30.5 that:

This acreage change does not impair existing water rights and the overall project, as developed, is consistent with the original application. Licensing of the unpermitted acreage may occur without application or publication pursuant to SDCL 46-2A-4.



Eric Gronlund, Chief Engineer
Water Rights Program



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

JUN 02 2022

7925-3

Byron Hendrickson
45992 195th St
Estelline SD 57234

Dear Mr. Hendrickson:

Enclosed is Water License No. 7925-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

NOTE: The investigation found your irrigation system capable of diverting 1.33 cubic feet of water per second (cfs) which is equivalent to approximately 600 gallons per minute. The statutory limit for the 70 acres developed is 1.00 cfs (equivalent to 450 gpm). Diversion of water under this water license is limited to 1.00 cfs.

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7925-3**

(1) Byron Hendrickson, 45992 195th St, Estelline SD 57234 made Application No. 7925-3, November 15, 2013, for a water permit to divert 2.22 cubic feet of water per second from ground water, two wells (Big Sioux Brookings Aquifer), Hamlin County, South Dakota for irrigation purposes. Permit No. 7925-3, with a priority date of November 15, 2013, was approved January 27, 2014, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before January 27, 2019, and for the application to beneficial use of water on or before January 27, 2023.

An investigation conducted for licensing purposes found 3.5 acres developed outside of the permitted area. Pursuant to SDCL 46-5-30.5, the Chief Engineer made a finding that existing water rights will not be impaired and the overall project, as developed, is consistent with the original application.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.00 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,430'N & 35'E of the SW corner Section 30, T113N, R51W (NW $\frac{1}{4}$ SW $\frac{1}{4}$).
Latitude 44.56189, Longitude -97.00693

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

Section 30, T113N, R51W	NW $\frac{1}{4}$ SW $\frac{1}{4}$	37.0 acres
	NE $\frac{1}{4}$ SW $\frac{1}{4}$	2.0 acres
	SE $\frac{1}{4}$ SW $\frac{1}{4}$	1.5 acres
	SW $\frac{1}{4}$ SW $\frac{1}{4}$	29.5 acres
Total		70.0 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Byron Hendrickson, 45992 195th St, Estelline SD 57234 the holder and/or owner of Water Right No. 7925-3 is issued a license to appropriate water, the right to use 1.00 cubic feet of water per second from ground water, one well (Big Sioux Brookings Aquifer) with a priority date of November 15, 2013, from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7925-3 and subject to the following qualifications:

- The well approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The wells authorized by Permit No. 7925-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. ***Only one well was drilled. Kaiser Well Drilling Inc drilled the well in August 2014. A well completion report is on file with the Water Rights Program.***

continued

- This Water Right is approved subject to the irrigation water use questionnaire being submitted each year.

Eric Gronlund

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

JUN 02 2022

date

