

WATER PERMIT NO. 7692-3

Name of Applicant: Adam J Wiese

Address: 22603 479th Ave, Flandreau SD 57028

Phone: 605 530-2641

Amount of Water Claimed: 2.22 cfs

Total Acres: 220

Source of Water Supply: groundwater (2 wells)

Water to be used for: irrigation

County: Moody

Type of Waste Disposal System:

Location: 5 miles north of Flandreau

PRIORITY

Date Received: 2-4-13

Application/License Fee: \$ 1150

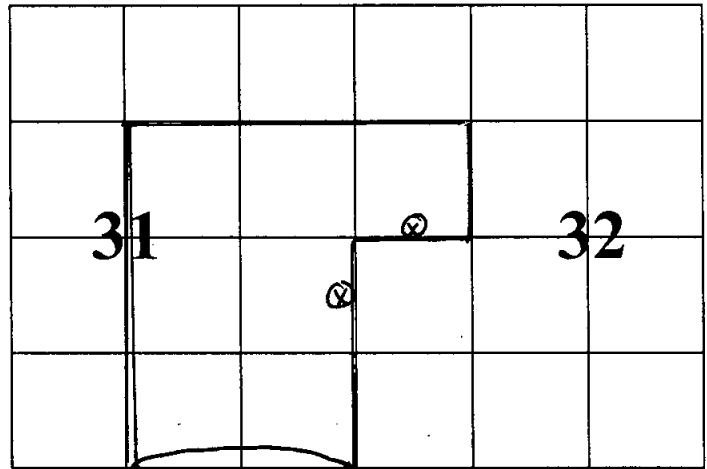
Corrected Application Received: 2-12-13

Period of Annual Use: May 1 – August 31

Remarks:

Diversion Point: NW 1/4 SW 1/4 Sec 32 and NE
1/4 SE 1/4 Sec 31; all in T108N-R48W

Land to be Irrigated: NNW 1/4 SW 1/4 Sec 32, SE
1/4, S 1/2 NE 1/4 Sec 31; all in T108N-R48W



Depth of Well: 43 feet deep

Well Driller: Steffl Drilling

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 2-21-13

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7692-3</u> (office use only) Hydrologic Unit <u>16170203</u>
	Basin <u>Sioux River</u> <u>605-997-3725</u>
	Newspaper <u>Moody Co. Ent. Box 71 Flandreau 57028</u>
	<u>Brookings Register Box 177 57006</u> <u>605-692-6271</u>

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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 ADAM J. WIESE,(check one) ☐ Owner ☒ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

 Mailing Address 22603 479th Ave. Flandreau SD 57028
 (Address) (City) (State) (Zip Code)

 Home Phone 605-997-5095 Cell 605-530-2641 Email ak-wiese@hotmail.com

 2. Amount of water claimed 2.22 *CFS or 1,000 **GPM ***AF Total Acreage 220
 (*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply Big Sioux Aquifer
 4. Location of point of diversion 2 wells in SW1/4 NW1/4 section 32, T108N R48W NE1/4 SE1/4 Sec 31-
 (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

T108N - R48W County Moody
5. County or counties where water will be used Moody6. Annual period during which water is to be used May-August
 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
SW 1/4 NW1/4 Sec.32 T108N R48W	40	SW1/4 SE1/4 Sec. 31 T108N R48W	20
NE1/4 SE1/4 Sec. 31 T108N R48W	40	SE1/4 NE1/4 Sec. 31 T108N R48W	40
SE 1/4 SE 1/4 Sec. 31 T108N R48W	40	SW1/4 NE1/4 Sec.31 T108N R48W	20
NW 1/4 SE 1/4 Sec. 31 T108N R48W	20		

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

Development of two 12" Big Sioux Aquifer wells to irrigate up to 220 acres in Section 31 & 32 in Township 108 North, Range 48 West, Moody County, South Dakota.

Landowner Tract Sec. 32 : Dan & Marda Olson, 22564 479th Ave. Flandreau, SD 57028

Landowners Tract Sec. 31: Steve Powers, PO Box 97, Edgley, ND 58433; Brenda Byrnes, 502 Dogwood, Marshall, MN 26258; Marda Olson, 22564 479th Ave. Flandreau, SD 57028.

 I, Adam J. Wiese, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

**SOUTH DAKOTA
WATER PERMIT NO. 7692-3**

Date of first receipt of application February 4, 2013.

Date of return to applicant for corrections, amendments or changes February 5, 2013.

Date of receipt of corrected application February 12, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7692-3 to Adam J Wiese, 22603 479th Ave, Flandreau SD 57028 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. 7692-3 appropriates 2.22 cubic feet of water per second from two wells to be completed into the Big Sioux:Moody Aquifer (43 feet deep) located in the SW 1/4 NW 1/4 Section 32 and NE 1/4 SE 1/4 Section 31 for irrigation of 220 acres located in the SW 1/4 NW 1/4 Section 32 and SE 1/4, S 1/2 NE 1/4 Section 31; all in T108N-R48W.
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 – August 31.
3. The date from which applicant may claim right is February 4, 2013.
4. The date of approval of Permit No. 7692-3 is May 6, 2013.
5. One-fifth of the construction is to be completed on or before November 6, 2015.
6. All construction is to be completed on or before May 6, 2018.
7. Water is to be put to beneficial use on or before May 6, 2022.
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. 7692-3 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

JUN 21 2013

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 Steffl Drilling & Pump (463)
(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 43 Depth to Top of Water Bearing Material 8 Depth to Water from Surface 10'

d) Distance to nearest existing domestic well:

On applicant's property On property owned by others 750'

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)

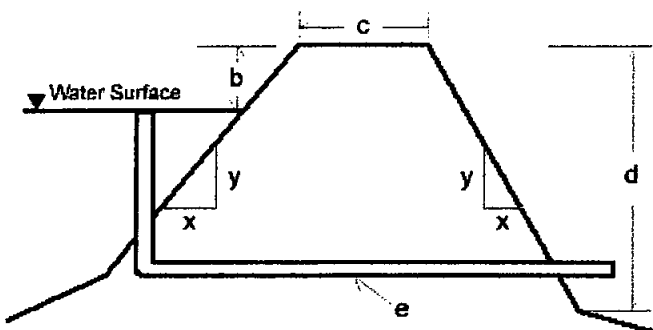
Upstream

Downstream

h) Surface Area of Impoundment

i) Storage Acre Feet

j) Drainage Area Above Dam Acres



Sec 25
T108N
R49W

Sec 30
T108N
R48W

Sec 29
T108N
R48W

Sec 36
T108N
R49W

Sec 31
T108N
R48W

Sec 32
T108N
R48W

Sec 1
T107N
R49W

Sec 6
T107N
R48W

Sec 5
T107N
R48W

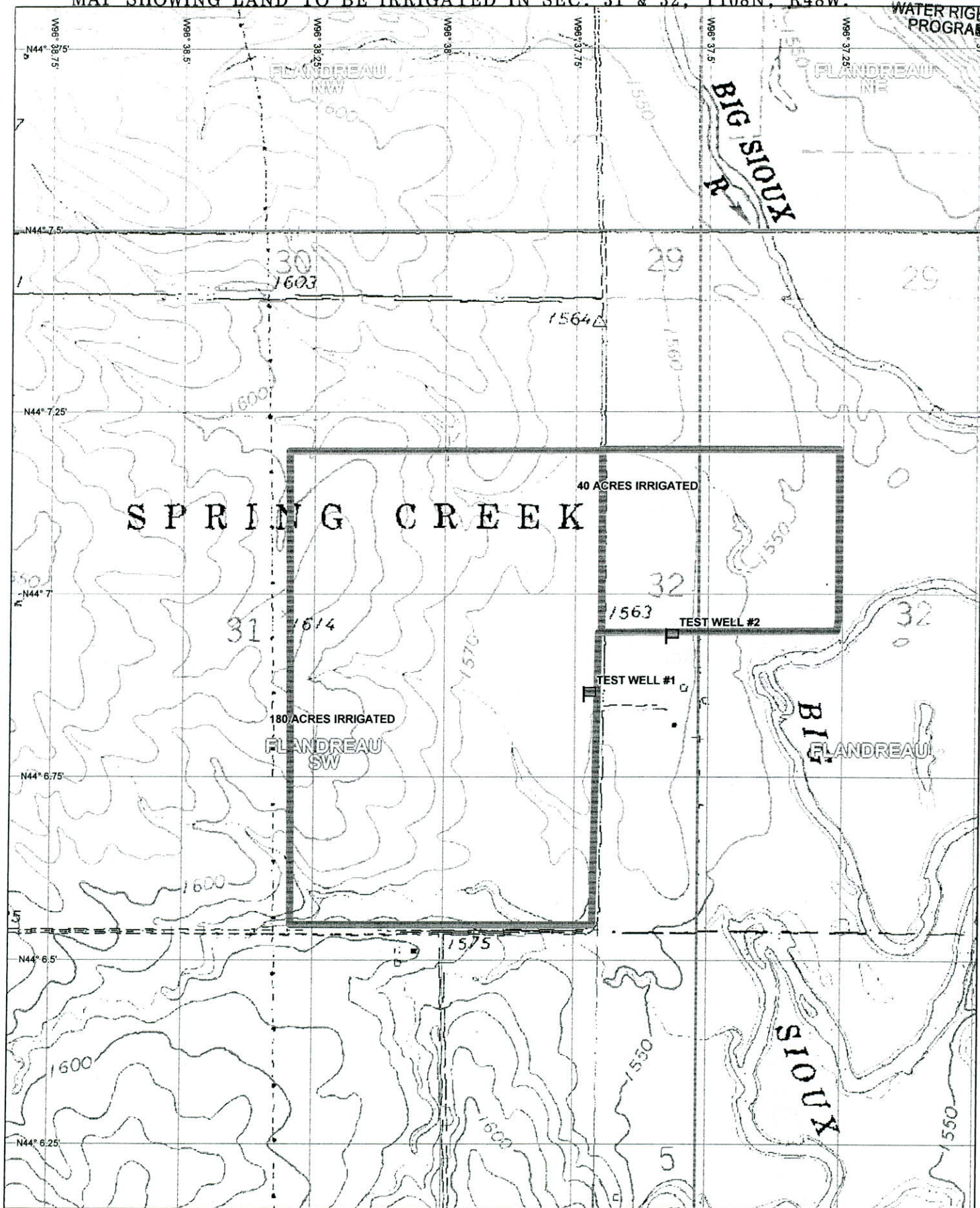


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MAP SHOWING LAND TO BE IRRIGATED IN SEC. 31 & 32, T108N, R48W.

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3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 500 ft Scale: 1 : 12,800 Detail: 14-0 Datum: WGS84

DIVERSION POINT(S) TO BE CLOSE TO TEST WELL #2

Date:

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SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW ¼ SW ¼ Sec 32 Twp 108 Rg 48

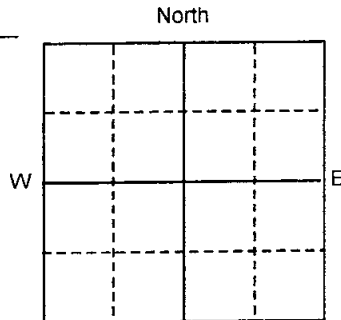
Well Owner: Adam Wiese

Business Name:

Address: 22603 479th Ave

City, State, Zip: Flandreau SD 57028

County Moody

Please mark well
location with an "X"

Well Completion Date

January 3, 2013

K 1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

☐ Steel ☐ Plastic ☐ Other
 If other describe

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

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	2	Lb/gal	0.0 Ft	43.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe ☐ Manufactured
 Diameter _____ Inches Length _____ Feet

Material

Slot Size _____ Set From _____ Feet to _____ Feet

Other information

WAS A PACKER OR SEAL USED? ☐ Yes ☐ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?☐ No, Why Not?Lab to which water
quality sample sent for analysis

WELL LOG:

		DEPTH	
FORMATION		FROM	TO
Top Soil	Blk	0	2
Clay	Ylw	2	8
Sand		8	40
Clay	Blu	40	43

STATIC WATER LEVEL

_____ FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____

REMARKS

Test Hole #2

44 06 57.1N

96 37 32.7W

12" 600 - 800 GPM

This well was drilled under license # 463 and this
report is true and accurate.

Drilling firm: Steffi Drilling & Pump Inc / Gary Olson

Signature of License Representative:

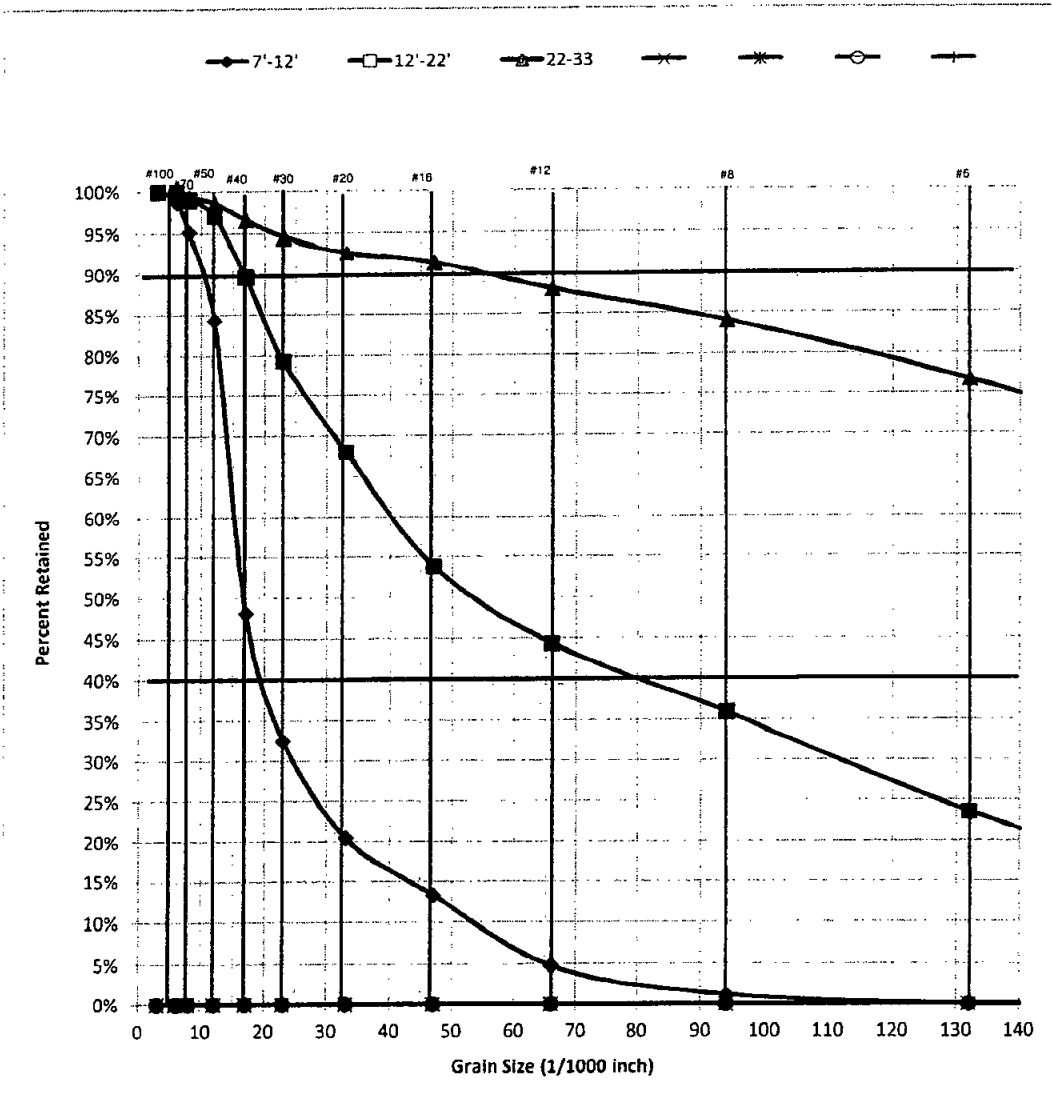
Signature of Well Owner or Equitable Property Holder:

Date:

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Johnson Screens
651-636-3900

SAND ANALYSIS



Job Name Adam Wiese Test Hole #1
Location
Driller Stefft Drilling

Sample ID 011513-6
Analyzed by: Al Smith, 651-638-3160
Date: 1/15/2013

Casing ϕ 12"
Screen ϕ 12" Pipe Size

Yield 600 - 700 GPM (Estimated)
SWL (ft) 10' (Estimated)

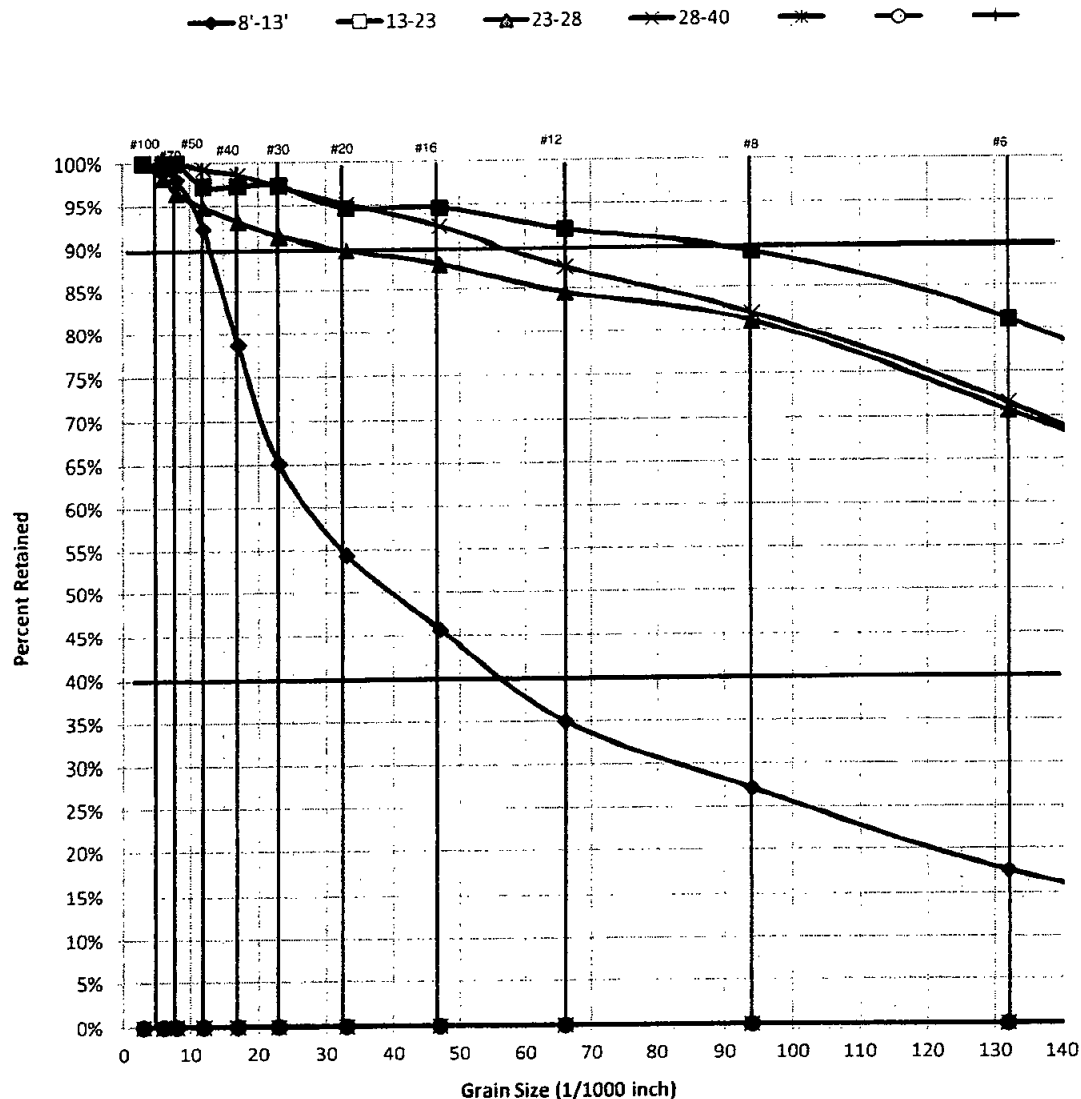
Recommended Slot Size 120 Slot From 25' - 33'
Recommended Gravel Pack #120 Well Slot Red Flint or Pea Rock Gravel Pack

Based exclusively on the samples provided by the contractor, a sieve analysis graph and suggested screen slot size is provided as requested. Since numerous construction considerations and site circumstances influence successful well completion, Johnson Screens assumes no responsibility for final well performance nor awareness of local regulations pertaining to well installations.

Prepared by: albert j smith

Send Samples to 1950 Old Highway 8, New Brighton, MN 55112

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Job Name Adam Wiese
Location
Driller Stefft Drilling

Casing ϕ 12"
Screen ϕ 12" Pipe Size

Recommended Slot Size 120 Slot From 30' - 40'
Recommended Gravel Pack #120 Well Slot Red Flint or Pea Rock Gravel Pack

Sample ID 010913-5
Analyzed by: Al Smith, 651-638-3160
Date: 1/9/2013

Yield 600 - 800 GPM (Estimated)
SWL (ft) 10' (Estimated)

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Based exclusively on the samples provided by the contractor, a sieve analysis graph and suggested screen slot size is provided as requested. Since numerous construction considerations and site circumstances influence successful well completion, Johnson Screens assumes no responsibility for final well performance nor awareness of local regulations pertaining to well installations.

Prepared by: albert j smith

Send Samples to 1950 Old Highway 8, New Brighton, MN 55112

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WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 2/4, 20 13

RECEIVED OF Kathryn M Wiese 22603 479th Ave Flandreaus SD 57028

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

Fee for Application for Permit No. <u>7692-3</u> to Appropriate Water, to construct and to put water to beneficial use	950	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>7692-3</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	1150 00

No. 06081

By [Signature]
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

February 5, 2013

Adam J Wiese
22603 479th Ave
Flandreau SD 57028

Dear Mr. Wiese:

Thank you for submitting the *Application for a Permit to Appropriate Water* for irrigation in Moody County. In order to complete the application, the following is required.

- Enclosed are the map and a copy of your application. The area outlined in red on the map does not coincide with the acreage identified in Item No. 7 of the application. For your use, I have enclosed another map. Please outline the 220 acres to be irrigated and mark the proposed well locations with an "X".

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures

Feb 8, 2013

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FEB 12 2013

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Dear Mrs. Schlaak:

I have marked the proposed area to be irrigated on the map you sent me. I also marked the two proposed wells labeled by an X. I drew the approximate shapes in green marker of the two irrigation systems that I had in mind. The system in section 32 would be a circle system covering about 40 acres. The system in section 31 would be half- moon shape covering up to 180 acres.

If you have any more questions, please contact me at 605-530-2641 or ak-wiese@hotmail.com

Sincerely,



Adam Wiese

22603 479th Ave

Flandreau SD 57028



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

April 15, 2013

Dan and Marda Olson
22564 479th Avenue
Flandreau SD 57028

Steve Powers
PO Box 97
Edgley ND 58433

Brenda Byrnes
502 Dogwood
Marshall MN 56258

Mr and Mrs Olson, Mr Powers and Ms Byrnes:

Adam Wiese filed a water right permit application for irrigation in Moody County, South Dakota. On the application Mr. Wiese listed each of you as an owner of a tract of land intended for irrigation. Therefore, DENR is sending you the staff report, recommendation and notice regarding the application. The notice is scheduled to be published in the Moody County Enterprise and Brookings County Register on April 24, 2013.

Please let me know if you have any questions regarding the application.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
605 773-3352

Enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7692-3, Adam J Wiese**

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. 7692-3, Adam J Wiese, 22603 479th Avenue, Flandreau SD 57028.

The Chief Engineer is recommending APPROVAL of Application No. 7692-3 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. 7692-3 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

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7692-3
ADAM J WIESE
March 18, 2013

Water Permit Application No. 7692-3 proposes to appropriate water from two wells to be completed into the Moody management unit of the Big Sioux aquifer at a maximum diversion rate of 2.22 cubic feet of water per second (cfs). The wells will be located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 32 and the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31, all in T108N-R48W and are to be approximately 43 feet deep. This application proposes to irrigate 220 acres located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 32 and SE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 31, all in T108N-R48W in Moody County.

AQUIFER: Moody management unit of the Big Sioux aquifer (BS:M)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Moody management unit of the Big Sioux aquifer is a surficial aquifer composed of glacial outwash and materials ranging from fine-to-medium, poorly sorted sand to a well-sorted sand and medium gravel (Hansen, 1988). The Big Sioux: Moody aquifer is hydraulically connected to the Big Sioux River. The aquifer is primarily under water-table conditions, and is in the area of this application as well. The proposed well sites are located in northern Moody County less than one quarter mile west of the Big Sioux River and less than nine miles from the Minnesota and South Dakota state line. The Big Sioux: Moody aquifer encompasses regions of Minnehaha and Moody Counties. The aquifer underlies approximately 35,500 acres, and contains an estimated 133,130 acre-feet of recoverable water in storage (Hedges and others, 1982). Hansen estimated the average specific yield of the Big Sioux aquifer to be approximately 20 percent (1988). Koch estimated the specific yield of the aquifer to range from approximately 10 to 17 percent (1980). The aquifer thickness ranges from approximately 4 to 54 feet and overlies and is bound to the east and west by relatively impermeable till (Hansen, 1988). The till has a hydraulic conductivity of about 5×10^{-4} feet per day (ft/d) (Hansen, 1988). The well completion reports submitted with this application reported 32 and 26 feet of saturated thickness at the proposed well sites.

SDCL 46-2A-9

In accordance with SDCL 46-2A-9, a permit may be issued to appropriate water only if there is 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 review the availability of unappropriated water and existing rights within the Big Sioux: Moody aquifer.

WATER AVAILABILITY:

This application proposes to appropriate water from the Big Sioux: Moody aquifer. If this application is approved, it is likely that the actual water use will be less than 440 acre-feet per year (ac-ft/yr). The probability of unappropriated water available from the aquifer can be evaluated using 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.”

Recharge versus Discharge:

Recharge:

Recharge to the Big Sioux: Moody aquifer occurs through rain and snowmelt infiltration, inflow during times of high flow from the Big Sioux River, and from uncontrolled flowing wells completed into the underlying Howard aquifer (Hansen, 1988). The average annual recharge rate to the Big Sioux aquifer is estimated to range from 2.7 to 6.9 in/yr if flow net analysis is ignored (Hedges and others, 1985). Given the area of the Big Sioux: Moody aquifer of 35,500 acres, the average annual recharge to the aquifer is estimated to range from 7,987 to 20,413 ac-ft/yr.

Discharge:

Discharge from the Big Sioux: Moody aquifer is by evapotranspiration, discharge to the Big Sioux River, and withdrawal from wells (Hansen, 1988). There are a number of completion reports on file with the SD DENR-Water Rights Program for domestic use wells completed into the Big Sioux: Moody aquifer (Water Rights, 2013b) and there are currently 39 water rights/permits appropriating water from the Big Sioux: Moody aquifer (Water Rights, 2013c). In addition, there are three future use permits reserving water from the aquifer. The distribution of these appropriations and their types are shown in Table 1.

Water Rights/Permits	Number
Commercial	6
Irrigation	26
Municipal	2
Rural Water System	5
Future Use Permits	Number
Big Sioux Community Water	2
City of Flandreau	1

Table 1. Water rights/permits from the Big Sioux: Moody aquifer (Water Rights, 2013c).

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.
3. Future use permits can be fully developed.

The expected water use for non-irrigation purposes, including the 2,541 ac-ft/yr reserved for future use, from the Big Sioux: Moody aquifer is less than 6,700 ac-ft/yr based on current water appropriations. The total maximum diversion rate for non-irrigation purposes is 10.32 cfs.

The annual reported water use from the Big Sioux: Moody aquifer for irrigation purposes is displayed in Table 2. The average annual use due to irrigation over the period of record is 825.43 ac-ft/yr.

YEAR	NO. OF PERMITS	APPROPRIATION (AC-FT/YR)	PUMPAGE REPORTED (AC-FT/YR)
2011	26	10469.4	474.86
2010	25	10091.4	245.55
2009	24	9883.4	753.24
2008	24	9930.4	745.66
2007	23	9694.4	860.22
2006	21	9370.4	960.18
2005	21	9370.4	556.6
2004	21	9370.4	379.62
2003	20	9050.4	1203.97
2002	20	9050.4	1339.73
2001	19	8998.4	1050.62
2000	19	8998.4	851.75
1999	19	8998.4	499.44
1998	19	8998.4	1299.52
1997	20	9248.4	575
1996	22	10088.4	1006.37
1995	24	9350.4	402.27
1994	26	9980.4	693.93
1993	25	9469.9	7
1992	24	9219.9	193.5
1991	25	9721.71	1163.1
1990	25	9833.11	812.5
1989	31	12694.18	1434.95
1988	31	12694.18	1931
1987	30	11814.18	743.5
1986	29	11602.18	260
1985	28	11713.18	1113.5
1984	26	10707.97	582
1983	27	10962.18	1127.99
1982	26	10318.97	733.54
1981	36	16526	1478
1980	35	16206	1243
1979	35	16206	517
MIN	19	8998.4	7.0
MAX	36	16526.0	1931.0
AVE	25.03	10625.21	825.43

Table 2. Irrigation from the Big Sioux: Moody aquifer (Water Rights, 1979-2011).

Comparison of the estimated average annual withdrawal from the Big Sioux: Moody aquifer with the estimated average annual recharge for the aquifer indicates that the average annual withdrawals from the aquifer do not exceed the average annual recharge to the aquifer. Therefore, unappropriated water is available from the Big Sioux: Moody aquifer. Specifically, unappropriated water is available for the appropriation proposed by this application.

Observation Well Data:

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

The SD DENR-Water Rights Program monitors 22 observation wells completed into the Big Sioux: Moody aquifer with three of these wells located within two miles of the proposed well sites (Water Rights, 2013b). Hydrographs for these wells are shown in Figures 1, 2 and 3.

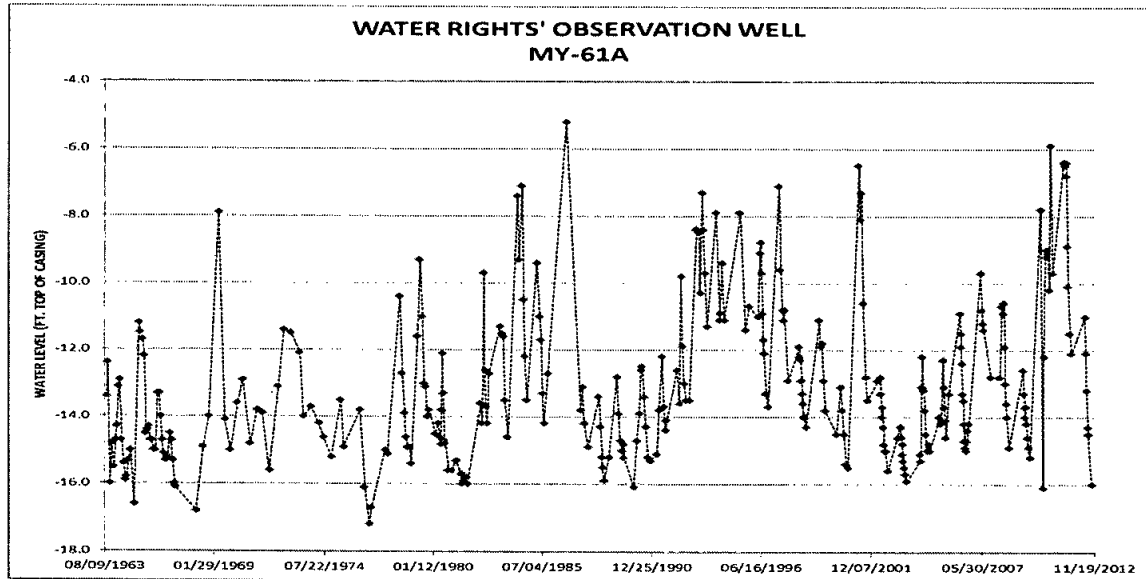


Figure 1. Hydrograph for SD DENR-Water Rights' Observation Well MY-61A completed into the Big Sioux: Moody aquifer approximately one and one half miles southeast of the well sites proposed by Application No. 7692-3 (Water Rights, 2013a).

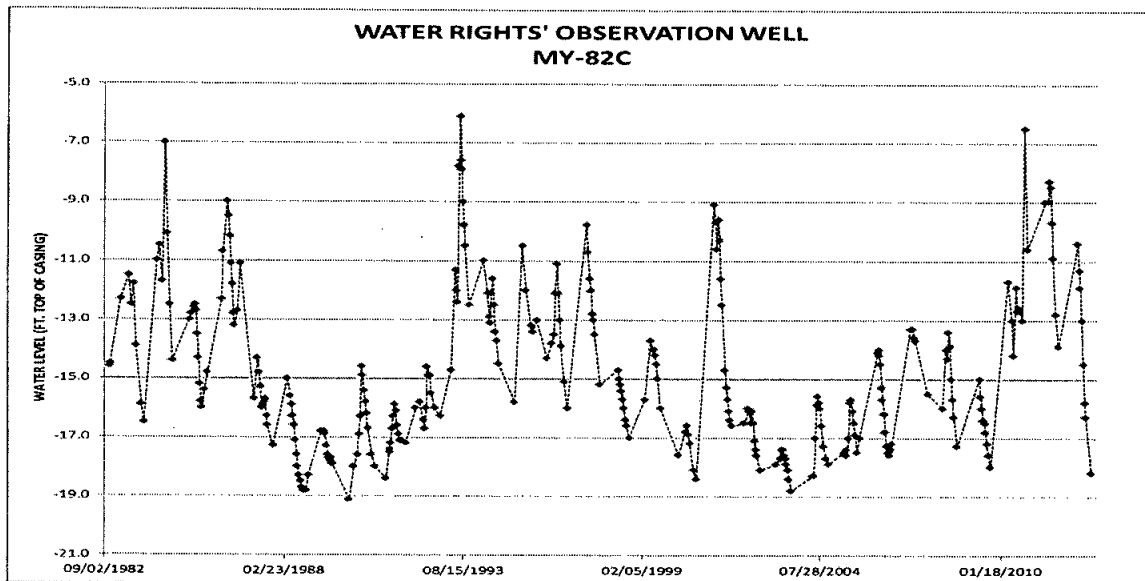


Figure 2. Hydrograph for SD DENR-Water Rights' Observation Well MY-82C completed into the Big Sioux: Moody aquifer approximately one and three quarter miles southeast of the well sites proposed by Application No. 7692-3 (Water Rights, 2013a).

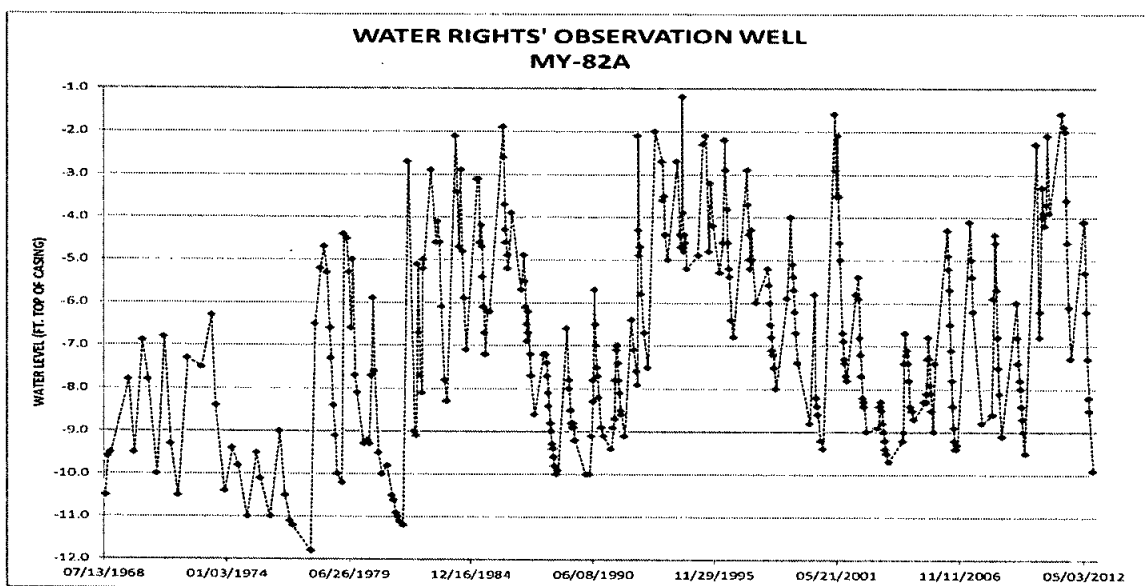


Figure 3. Hydrograph for SD DENR-Water Rights' Observation Well MY-82A completed into the Big Sioux: Moody aquifer less than two miles northwest of the well sites proposed by Application No. 7692-3 (Water Rights, 2013a).

The observation well data shows the aquifer responds well to climatic conditions with rising water levels during wet years and gradually declining water levels during dry years. The water level data shows that over the period of record, in general, discharge has not exceeded recharge. The observation well data shows that at the current level of development, climatic conditions mask the temporal effects of well withdrawals. Observation wells MY-82A and MY-61A show the effects of pumping, but these are not significant based on the saturated thickness available.

Therefore, recharge to and natural discharge from the Big Sioux: Moody aquifer significantly exceeds pumping; recognizing that natural discharge from the aquifer can be captured for pumping. The hydrographs document that there is unappropriated water available from the aquifer to support this appropriation.

EXISTING WATER RIGHTS:

The proposed well sites are located in northern Moody County less than one quarter mile west of the Big Sioux River and less than nine miles from the Minnesota and South Dakota state line. Figure 4 shows the nearby existing water rights located in the Big Sioux: Moody aquifer. The locations of the existing water rights/permits were determined using the best data reasonably available. The nearest water right/permit is Water Right No. 6317-3, for Dakota Layers LLP, located more than one and one half miles northwest and up-gradient from the proposed well sites.

There is history of a contested permit in this area. An opponent contested Water Permit No. 6632-3, for Prairie Gold Dairy LLC, in 2005 out of concern that appropriated water was being “sold” for agricultural use other than irrigation purposes. The Findings of Fact for this permit stated, “that there is a reasonable probability that unappropriated water is available for the Applicant’s proposed use” (Water Permit No. 6632-3, 2005). This water permit is within two miles of the well sites proposed by this application.

Observation Well MY-82A is located within 950 feet of Water Permit No. 6632-3, for Prairie Gold Dairy LLC, and the hydrograph, shown in Figure 3, reports minimal drawdown at this distance due to pumping. The hydrograph shows approximately eight feet of drawdown, which is not significant with approximately 30 feet of saturated thickness in this area. Based on the observation well data and the distance between wells, drawdown is not expected to be significant nor likely to cause adverse impacts to existing water rights or domestic wells.

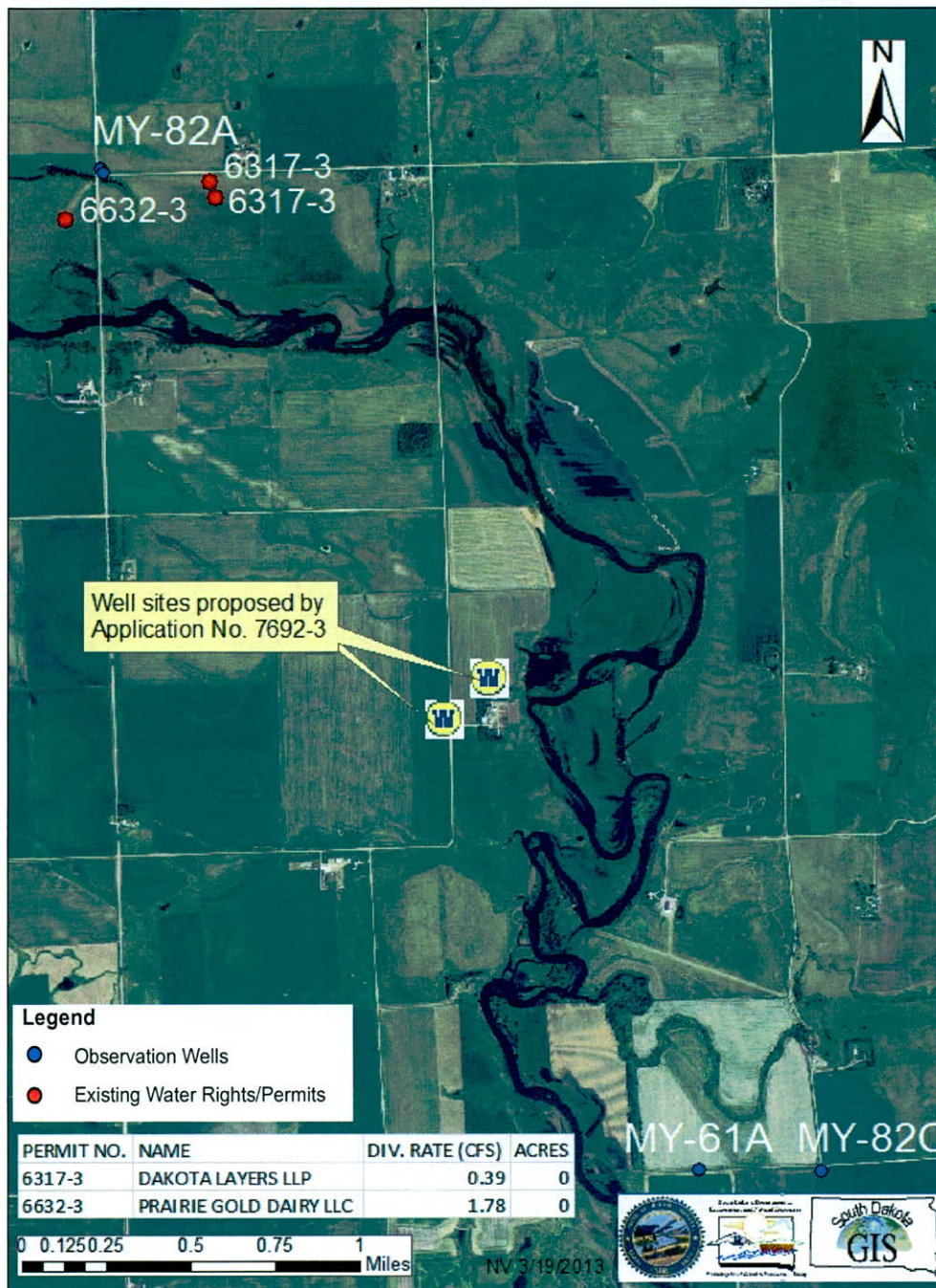
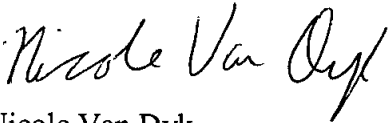


Figure 4. Existing water rights/permits located within close proximity to the well sites proposed by Application No. 7692-3 (Water Rights, 2013c).

CONCLUSIONS:

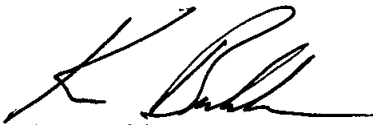
1. This application proposes to appropriate water for irrigation from the Big Sioux: Moody aquifer.
2. There is a reasonable probability that unappropriated water is available from the Big Sioux: Moody aquifer to supply this proposed appropriation.

3. The Big Sioux: Moody aquifer is unconfined in this area, and drawdown from pumping is not expected to be significant very far from a production well.
4. There is a reasonable probability that the wells proposed by this application will not adversely impact existing water rights or domestic wells.



Nicole Van Dyk
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Hansen, D.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, 38 p.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A., 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Hedges, L.S., Allen, J., Holly D.E., 1985, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge; 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.
- Water Permit No. 6632-3, 2005, Findings of Fact, Conclusions of Law and Final Decision, 27 December, 2005, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 1979-2011, Irrigation Questionnaire Summaries 1979-2011, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013a, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013b, Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013c, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

RECEIVED

APR 26 2013

WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)

) SS

County of Moody

I, Angela Nibbelink

certify that the attached printed Notice was taken

from the Moody County
Enterprise

printed and published in Flandreau

County of Moody and

state of South Dakota. The notice was published

in the newspaper on the following date:

April 24, 2013

Cost of Printing \$23.81

Angela Nibbelink
(Signature)

Office Manager
(Title)

4-24-2013
(Date Signed)

NOTICE OF APPLICATION NO.

7692-3 to Appropriate Water

Notice is given that Adam J Wiese, 22603 479th Ave, Flandreau SD 57028 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:Moody Aquifer (43 feet deep) located in the SW 1/4 NW 1/4 Section 32 and NE 1/4 SE 1/4 Section 31 for irrigation of 220 acres located in the SW 1/4 NW 1/4 Section 32 and SE 1/4, S 1/2 NE 1/4 Section 31; all in T108N-R48W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7692-3 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 May 6, 2013.

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 \$26.

RECEIVED

APR 29 2013

Affidavit of Publication

State of South Dakota

WATER RIGHTS
PROGRAM

10/

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

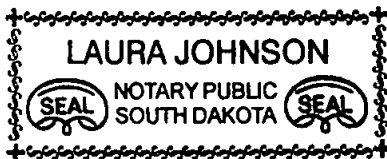
Leg#413 Notice #7692-3- Wiese

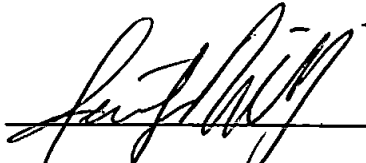
same was published, is hereto attached marked Exhibit
said newspaper for _____ 1 times, to-wit:

April 24, 2013

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-three dollars and twenty-three cents \$23.23

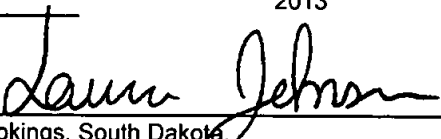




25th _____ day of

April

2013



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

Legal 413, 1x 4/24
NOTICE OF APPLICATION NO. 7692-3 to
Appropriate Water
Notice is given that Adam J Wiese, 22603 479th Ave, Flandreau SD 57028 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/Moody Aquifer (43 feet deep) located in the SW 1/4 NW 1/4 Section 32 and NE 1/4 SE 1/4 Section 31 for irrigation of 220 acres located in the SW 1/4 NW 1/4 Section 32 and SE 1/4, S 1/2 NE 1/4 Section 31; all in T108N-R48W.
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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 \$23.23.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

April 15, 2013

Moody County Enterprise
PO Box 71
Flandreau SD 57028

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7692-3 to Appropriate Water. Please publish the notice once on April 24, 2013. 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 Adam J Wiese, 22603 479th Ave, Flandreau SD 57028 (Ph # 605-997-5095).

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

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

April 15, 2013

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

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

April 15, 2013

Adam J Wiese
22603 479th Ave
Flandreau SD 57028

Dear Mr. Wiese:

Water Permit Application No. 7692-3 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 Moody County Enterprise printed at Flandreau SD (Ph # 605-997-3725) and 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.

Instruction to Newspaper - Publish the Notice on April 24, 2013. 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. 7692-3 to Appropriate Water

Notice is given that Adam J Wiese, 22603 479th Ave, Flandreau SD 57028 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:Moody Aquifer (43 feet deep) located in the SW 1/4 NW 1/4 Section 32 and NE 1/4 SE 1/4 Section 31 for irrigation of 220 acres located in the SW 1/4 NW 1/4 Section 32 and SE 1/4, S 1/2 NE 1/4 Section 31; all in T108N-R48W.

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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**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

JUN 21 2013

Adam J Wiese
22603 479th Ave
Flandreau SD 57028

Dear Mr. Wiese:

Enclosed is Water Permit No. 7692-3 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

7692-3

SD EForm - 1621LD V1

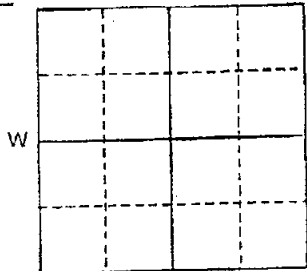
11-02

SOUTH DAKOTA WATER WELL COMPLETION REPORT

Location NW ¼ SW ¼ Sec 32 Twp 108 Rg 48

County Moody

North

Please mark well
location with an "X"

Well Completion Date

March 14, 2013

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	FT	32.0 FT	18.00 IN
LB/FT	12.00 IN	40.0 FT	45.0 FT	18.00 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Quick Grout	8	Lb/gal	0.0 Ft	22.0 Ft
Red Flint		Lb/gal	22.0 Ft	45.0 Ft

Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe ☒ Manufactured

Diameter 12.00 Inches Length 8.0 Feet

Material Stainless Steel

Slot Size 120 Set From 32.0 Feet to 40.0 Feet

Other information

WAS A PACKER OR SEAL USED?

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: Adam Wiese

Business Name:

Address: 22603 479th Ave

City, State, Zip: Flandreau SD 57028

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil	0	2
Clay	2	8
Sand	8	40
Clay	40	45

STATIC WATER LEVEL

25' 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: SUBMERSIBLE

☐ Bailed

☐ Other

Pumping Level Below Land Surface

32 Ft. After 6 Hrs. pumped 135 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Production Well #2

44 06 57.1N

96 37 32.7W

150 GPM

This well was drilled under license # 463 and this report is true and accurate.

Drilling firm: Steffi Drilling & Pump Inc / Kris VanHeuveln

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

3-20-13

RECEIVED

SEP 12 2013

WATER RIGHTS
PROGRAM

7692-3

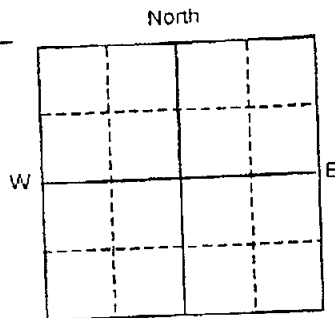
11-02

SOUTH DAKOTA WATER WELL COMPLETION REPORT

Location NW ¼ SW ¼ Sec 32 Twp 108 Rg 48

County Moody

Please mark well location with an "X"



Well Completion Date

April 29, 2013

1 Mile

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

PROPOSED USE:

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

CASING DATA:

☐ Steel
☒ Plastic
☐ Other
 If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	1.0 FT	21.0 FT	17.50 IN
LB/FT	12.00 IN	28.0 FT	38.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Quick Grout	3	Lb/gal	0.0 Ft	11.0 Ft
Red Flint	30	Lb/gal	11.0 Ft	38.0 Ft

 Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe
☒ Manufactured
 Diameter 12.00 Inches Length 7.0 Feet
 Material Stainless Steel
 Slot Size 120 Set From 21.0 Feet to 28.0 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: Adam Wiese

Business Name:

Address: 22603 479th Ave

City, State, Zip: Flandreau SD 57028

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil	0	2
Clay	2	5
Sand	5	28
Clay	28	38

STATIC WATER LEVEL

11'4" FEET

If flowing: closed in pressure

GPM flow through PSI

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

Ft. After Hrs. pumped GPM

20'6" Ft. After 4 Hrs. pumped 55 GPM

If pump installed, pump rate: GPM

REMARKS

Production Well #3

44 07 00.2N

96 37 26.0W

Elev 1575

RECEIVED

SEP 12 2013

WATER RIGHTS PROGRAM

This well was drilled under license # 463 and this report is true and accurate.

Drilling firm: Steffi Drilling & Pump Inc / Kris VanHeuveln

Signature of License Representative

Signature of Well Owner or Equitable Property Holder.

Date:

5-21-13

7692-3

SD EForm - 1621LD V1

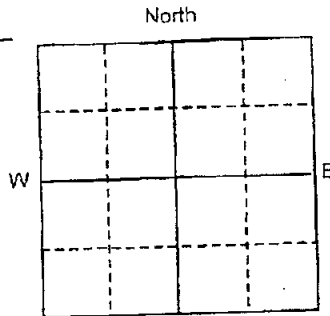
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW ¼ SW ¼ Sec 32 Twp 108 Rg 48

County Moody

Please mark well location with an "X"



Well Completion Date

April 30, 2013

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	1.0 FT	26.0 FT	17.50 IN
LB/FT	12.00 IN	33.0 FT	43.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Quick Grout	6	Lb/gal	0.0 Ft	16.0 Ft
Red Flint		Lb/gal	16.0 Ft	43.0 Ft

Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 12.00 Inches Length _____ Feet
Material Stainless SteelSlot Size 120 Set From 26.0 Feet to 33.0 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: Adam Wiese

Business Name: _____

Address: 22603 479th AveCity, State, Zip: Flandreau SD 57028

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil Blk	0	2
Clay Ylw	2	4
Sand Red/Brn	4	33
Clay Blu	33	43

STATIC WATER LEVEL 11'6" 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: submersible☐ Bailed☐ Other

Pumping Level Below Land Surface

24'3" Ft. After _____ Hrs. pumped _____ GPM6 Ft. After _____ Hrs. pumped 634 GPM

If pump installed, pump rate: _____ GPM

REMARKS

Production Well #4

44 07 04.5N

96 37 27.9W

Elev 1572

RECEIVED

SEP 12 2013

WATER RIGHTS
PROGRAMThis well was drilled under license # 463 and this
report is true and accurate.Drilling firm: Steffl Drilling & Pump Inc / Kris VanHeuveln

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 5-21-13

RECEIVED

DEC 13 2013

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 12-10-13

TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM: Adam Wiese
(name)
22603 479th Ave
(address)
Flandreau SD 57028
(city, state, zip)

605-530-2641
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 7692-3 states that the water use system is to be constructed by

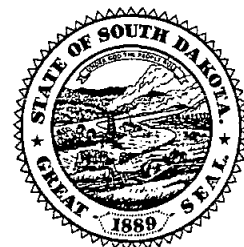
May 6, 2018, and water is to be put to beneficial use by May 6, 2022.
(date) (date)

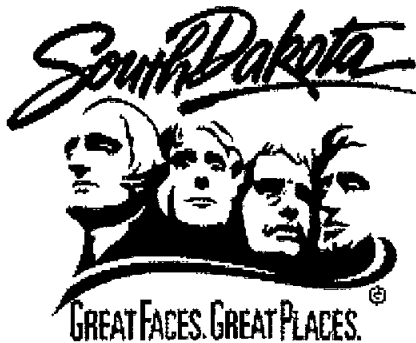
The water use system was completed on 12-1-2013.
(date)

Applying the water to beneficial use was completed on 12-1-2013.
(date)

You may schedule an investigation so that the water license may be issued.

Adam Wiese
(signature)





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

December 18, 2013

7692-3

Adam Wiese
22603 479th Ave
Flandreau SD 57028

Dear Mr. Wiese:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your irrigation system.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Genny McMath". The signature is written in a cursive, flowing style.

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

Approval of Location Change and/or Additional Diversion Point(s)

NAME: Adam J Wiese

ADDRESS: 22603 479th Ave, Flandreau SD 57028

DATE: September 8 2021

COUNTY: Moody

GENERAL DESCRIPTION OF AUTHORIZED PROJECT:

The permit holder is authorized to two wells complete into the Big Sioux:Moody Aquifer, one in the SW1/4 NW1/4 of Sec 32 and the second in the NE1/4 SE1/4 of Sec 31 to irrigate 220 acres in Secs 31 and 32: all in T108N-R48W. The well that was to be constructed in the NE1/4 SE1/4 of Sec 31 was constructed in the NW1/4 SW1/4 of Sec 32: all in T108N-R48W.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed, or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The relocated well was complete into the Big Sioux:Moody Aquifer.

- **Review of Existing Diversions**

There are several wells complete into the Big Sioux:Moody Aquifer in the area but the nearest wells are located over a mile away to the northwest and southeast of these wells.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the diversion point(s) be licensed as developed.



Mark D. Rath, Natural Resources Engineer III
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This change in location and/or additional diversion point(s) does not increase the potential for adverse effects to existing diversions.



Eric Gronlund, Chief Engineer
Water Rights Program

Licensing of Acreage Outside of Permitted Area

NAME: Adam J Wiese

ADDRESS: 22603 479th Ave, Flandreau SD 57028

DATE: September 8, 2021 COUNTY: Moody

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 206 acres as compared to 220 acres authorized by the permit.

UNPERMITTED ACREAGE:

- **Contiguous to Permitted Acreage**

Yes, the permit authorized irrigation in the SE1/4 and S1/2 NE1/4 of Sec 31 and SW1/4 NW1/4 of Sec 32, the actual irrigated acres also include the NW1/4 SW1/4 SE1/4 NW1/4 of Sec 32: all in T108N-R48W

- **Owned by Same Property Owner**

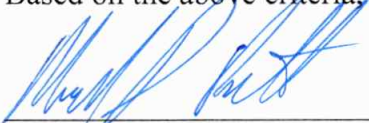
Yes, property owned by Daniel and Marda Olson

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

Yes, the system was constructed in the first year of the construction period.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the 4 acre area 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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7692-3

I have this day, June 15, 2021, made a thorough examination of the water use system constructed by Adam J Wiese 22603 479th Ave, Flandreau, SD 57028 of Permit No. 7692-3, bearing the priority of February 12, 2013 authorizing the diversion of 2.22 cu. ft. per second of the waters of the Big Sioux: Moody Aquifer for irrigation purposes, in Moody County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Steffl Drillings & Pump Inc
- 2) No. of Wells 2 (both drilled in 2013)
- 3) Depths 40 (South well) 33 (north well) feet
- 4) Well logs available Yes

Casing (South Well):

- 1) Diameter 12 inches
- 2) Length 37 feet
- 3) Type plastic

Screen:

- 1) Type slotted – stainless steel
- 2) Length 8 feet
- 3) Static water level 25'8" feet

Pump:

- 1) Make both submersible
- 2) Capacity 700 – 2 wells combined GPM
- 3) Motor: unknown

Casing (North Well):

- 1) Diameter 12 inches
- 2) Length 36 feet
- 3) Type plastic

Screen:

- 1) Type slotted – stainless steel
- 2) Length 7 feet
- 3) Static water level 11'6" feet

B. Works used to transport water to place of use: Buried pipe line from the two wells to the two pivots

C. Works used to apply water to beneficial use:

Center pivots:

- 1) Make 2- Valley
- 2) Overall length 1940 & 730 feet
- 3) Number of towers 10 (Section 31) & 3 (Section 32) both with end guns
- 4) Capacity 700 & 600 GPM

Chemigation Equipment:

- 1) Does chemigate Y (See attached photo showing direct injection into the main supply line without any backflow prevention in place)
- 2) Main line check valve N
- 3) Inspection port/air relief Y
- 4) Low pressure drain N
- 5) Discharge is 20' from source N
- 6) Interlock type electrical or mechanical (None)
- 7) Injection pump type piston or other ???
- 8) Injection check valve N
- 9) Injection line check valve or positive displacement pump Y/N ???

Comments: There is a potential problem with this installation

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: From the NW corner of Sec 32 - T108N-R48W - N Well 2040 ft S & 1040 ft E, Lat 44.11792 Long -96.62441 (SW NW Sec 32) S Well 2820 ft S & 710 ft E Lat 44.11579 Long -96.62571 (NW SW Sec 32).
2. The works are capable of diverting and conveying to the place of use 1.56 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:

Land in Sec 31-T108N-R48W

SE 1/4 NE 1/4 - 38 ac
SW 1/4 NE 1/4 - 11 ac
NW1/4 SE 1/4 - 24 ac
NE 1/4 SE 1/4 - 40 ac
SE 1/4 SE 1/4 - 38 ac
SW 1/4 SE 1/4 - 9 ac

Land in Sec 32-T108N-R48W

SE 1/4 NW 1/4 - 7 ac
SW 1/4 NW 1/4 - 35 ac
NW 1/4 SW 1/4 - 4 ac

comprising a total of 206 acres of land and the license should be issued for 1.56 cfs

All structures, wells and lands on map Y

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

According to Mr. Wiese, he is having a problem with one well which is making it difficult to pump 700 gpm at this time.

Irrigated acreage values were determined by using FSA maps and ArcMAP software.

The contact information (phone number & address) is current.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: June 19, 2021

Notes: On September 8, 2021, I spoke with Adam Wiese concerning the well logs for his irrigation system. On file are three production wells drilled for Mr. Wiese. He indicated he uses only two wells. The third well did not produce enough water and was capped. The well logs in the file are as follows:

Log marked Production Well #2 is south well

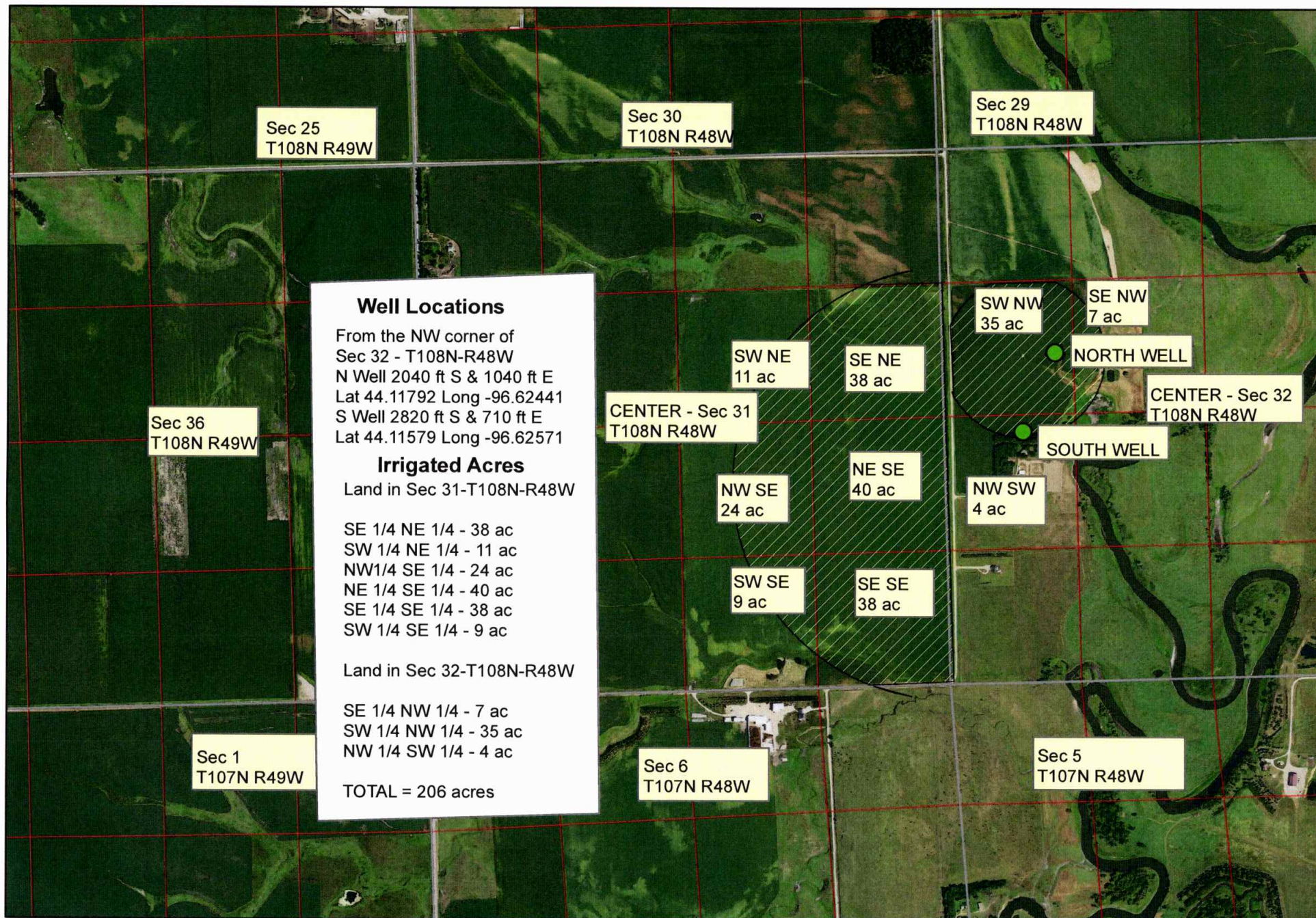
Log marked Production Well #4 is north well

Log marked Production Well #3 was low producing and never used.

I also mentioned to him that the chemigation system was not in compliance. He said to send him the needed updates and he would get it fixed. A copy of the chemigation rules and a diagram of correct set up will be sent to him with his license.

Genny





0 0.175 0.35 0.7 1.05 1.4 Miles



Darrell DeBoer
 Water Right Inspector
 DANR-Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 09 2021

7692-3

Adam Wiese
22603 479th Ave
Flandreau SD 57208

Dear Mr. Wiese:

Enclosed is Water License No. 7692-3. 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 of your water use system found the chemigation equipment on site did not meet requirements. The equipment needs a main line check valve; low pressure drain; discharge at least 20 feet from the water source; injection check valve; injection line check valve or positive displacement pump. Enclosed is a copy of the chemigation standards with a picture showing minimum requirements for applying chemicals for an engine drive or motor drive setup. If, after reading the information you have questions, please contact Ron Duvall with our program at 605 773-3352.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7692-3

(1) Adam J Wiese, 22603 479th Ave., Flandreau SD 57028 made Application No. 7692-3, February 4, 2013 for a water permit to divert 2.22 cubic feet of water per second from ground water (two wells, Big Sioux Moody Aquifer), Moody County, South Dakota for irrigation purposes. Permit No. 7692-3, with a priority date of February 4, 2013 was approved May 6, 2013 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 6, 2018 and for the application to beneficial use of said water on or before May 6, 2022.

The investigation of the water use system found four acres and one of the wells were located outside of the permitted area. Pursuant to SDCL 46-5-30.5, 46-5-13.1, ARSD 74:02:01:14.01, the Chief Engineer made a finding the change in acreage and diversion point location did not increase the potential for adverse effects to existing diversions 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 1.56 cubic feet of water per second (700 gallons per minute) for beneficial use. The location of the diversion point is:

- North Well: 2,040'S & 1,040'E of the NW corner of Section 32, T108N, R48W (SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 32) Latitude 44.11792, Longitude -96.62441
- South well: 2,820'S & 710'E of the NW corner of Section 32, T108N, R48W (NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 32) Latitude 44.11579, Longitude -96.62571 (NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 32).

(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 31, T108N, R48W				Section 32, T108N, R48W	
NW $\frac{1}{4}$ SE $\frac{1}{4}$	24 acres	SE $\frac{1}{4}$ NE $\frac{1}{4}$	38 acres	SE $\frac{1}{4}$ NW $\frac{1}{4}$	7 acres
NE $\frac{1}{4}$ SE $\frac{1}{4}$	40 acres	SW $\frac{1}{4}$ NE $\frac{1}{4}$	11 acres	SW $\frac{1}{4}$ NW $\frac{1}{4}$	35 acres
SE $\frac{1}{4}$ SE $\frac{1}{4}$	38 acres			NW $\frac{1}{4}$ SW $\frac{1}{4}$	4 acres
SW $\frac{1}{4}$ SE $\frac{1}{4}$	9 acres				

Total of 206 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Adam J Wiese, 22603 479th Ave., Flandreau SD 57028 the holder and/or owner of Water Right No. 7692-3 is issued a license to appropriate water, the right to use 1.56 cubic feet of water per second from ground water (two wells, Big Sioux Moody Aquifer) with a priority date of February 4, 2013 from the location specified in (2) of this license for irrigation purposes.

continued

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7692-3 and subject to the following qualifications:

- The wells 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. 7692-3 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. ***Both wells were drilled in 2013 by Steffl Drilling & Pump Inc. Copies of the well completion reports are on file with the Water Rights Program.***
- 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

SEP 09 2021

date

