

WATER PERMIT NO. 7529-3

Name of Applicant: Rusty Dimberg

Address: 41274 US Hwy 75, Ortonville MN 56278 Phone: 320-305-1555

Amount of Water Claimed: 0.89 cfs Total Acres: 36 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation County: Grant

Type of Waste Disposal System:

Location: 1/2 mile southwest of Big Stone City

PRIORITY Date Received: 11-5-12 Application/License Fee: \$ 700

Corrected Application Received: 11/26/12 Period of Annual Use: April 1- October 31

Remarks:

Diversion Point: NW 1/4 NE 1/4 Sec 19-T121N-
R46W

Land to be Irrigated: NW 1/4 NE 1/4, NE 1/4 NW
1/4 Sec 19-T121N-R46W

Depth of Well: 100 feet deep

Well Driller: Steffl Drilling & Pump Inc.

Remarks:

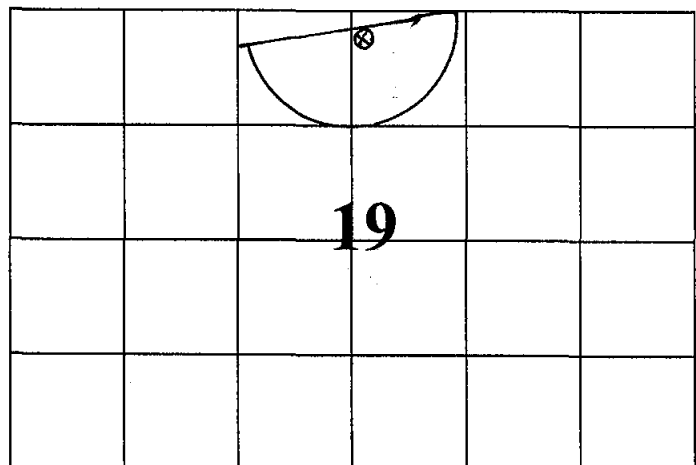
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 11-26-2012

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>7529-3</u> (office use only) Hydrologic Unit <u>07020001</u>
	Basin <u>Minnesota Whetstone</u> <u>605-432-4516</u>
	Newspaper <u>Grant Co. Review Box 390 Melbank 57252</u> <u>605-886-6901</u>
	<u>Public Opinion Box 10 Watertown 57201</u> <u>6901</u>

RECEIVED

NOV - 5 2012

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____

(Use predates Mar 2, 1955)

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

1. Name to Appear on Irrigation Permit Rusty Dimberg
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent _____
(name and complete address if different than above name)
- Mailing Address 41279 US Hwy 75 Ortonville MO 64278
(Address) (City) (State) (Zip Code)
- Home Phone 320-835-3807 Cell 820-305-1535 Email _____
2. Amount of water claimed 0.89 *CFS or 400 **GPM ~~400~~ ***AF Total Acreage 36
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply Ground
4. Location of point of diversion 1 well in NW 1/4 NE 1/4 sec 19 T12N R46W
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
- County GRANT
5. County or counties where water will be used GRANT
6. Annual period during which water is to be used April 1 - Oct. 31
7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
NW 1/4 NE 1/4 sec 19 T12N R46W	20		
NE 1/4 NW 1/4 sec 19 T12N R46W	16		

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

The well will be used for irrigation on 36 acres
requesting diversion rate greater than statutory limit

I, Rusty Dimberg, 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. 7529-3**

Date of first receipt of application November 5, 2012.

Date of return to applicant for corrections, amendments or changes November 6, 2012.

Date of receipt of corrected application November 26, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7529-3 to Rusty Dimberg, 41274 US Hwy 75, Ortonville MN 56278 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. 7529-3 appropriates 0.89 cubic feet of water per second from one well to be completed into the Veblen Aquifer (100 feet deep) located in NW 1/4 NE 1/4 Section 19 for irrigation of 36 acres located in the NW 1/4 NE 1/4, NE 1/4 NW 1/4 Section 19; all in T121N-R46W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.
3. The date from which applicant may claim right is November 5, 2012.
4. The date of approval of Permit No. 7529-3 is February 11, 2013.
5. One-fifth of the construction is to be completed on or before August 11, 2015.
6. All construction is to be completed on or before February 11, 2018.
7. Water is to be put to beneficial use on or before February 11, 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 well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7529-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7529-3 authorizes a maximum diversion rate of 0.89 cfs for the irrigation of 36 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: _____

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAR 28 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 1 Have test holes been drilled ☒ Yes ☐ No Drilled by STEISSI
(if yes, please provide copies of logs)

b) If existing wells, how many 0 Provide copy of log(s), if available. Drilled by _____

c) Well Depth 100' Depth to Top of Water Bearing Material _____ Depth to Water from Surface EST 20'

d) Distance to nearest existing domestic well:

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

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

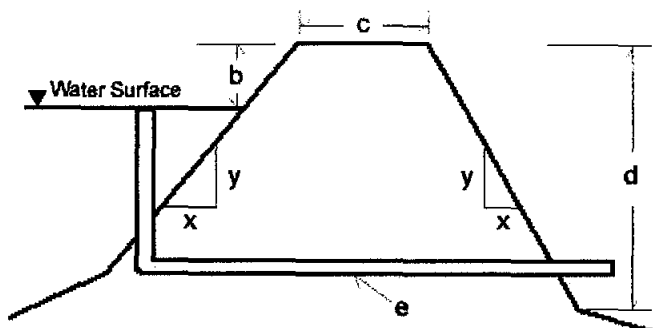
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



Sec 13
T121N
R47W

Sec 18
T121N
R46W

Sec 17
T121N
R46W

Sec 24
T121N
R47W

Sec 19
T121N
R46W

Sec 20
T121N
R46W

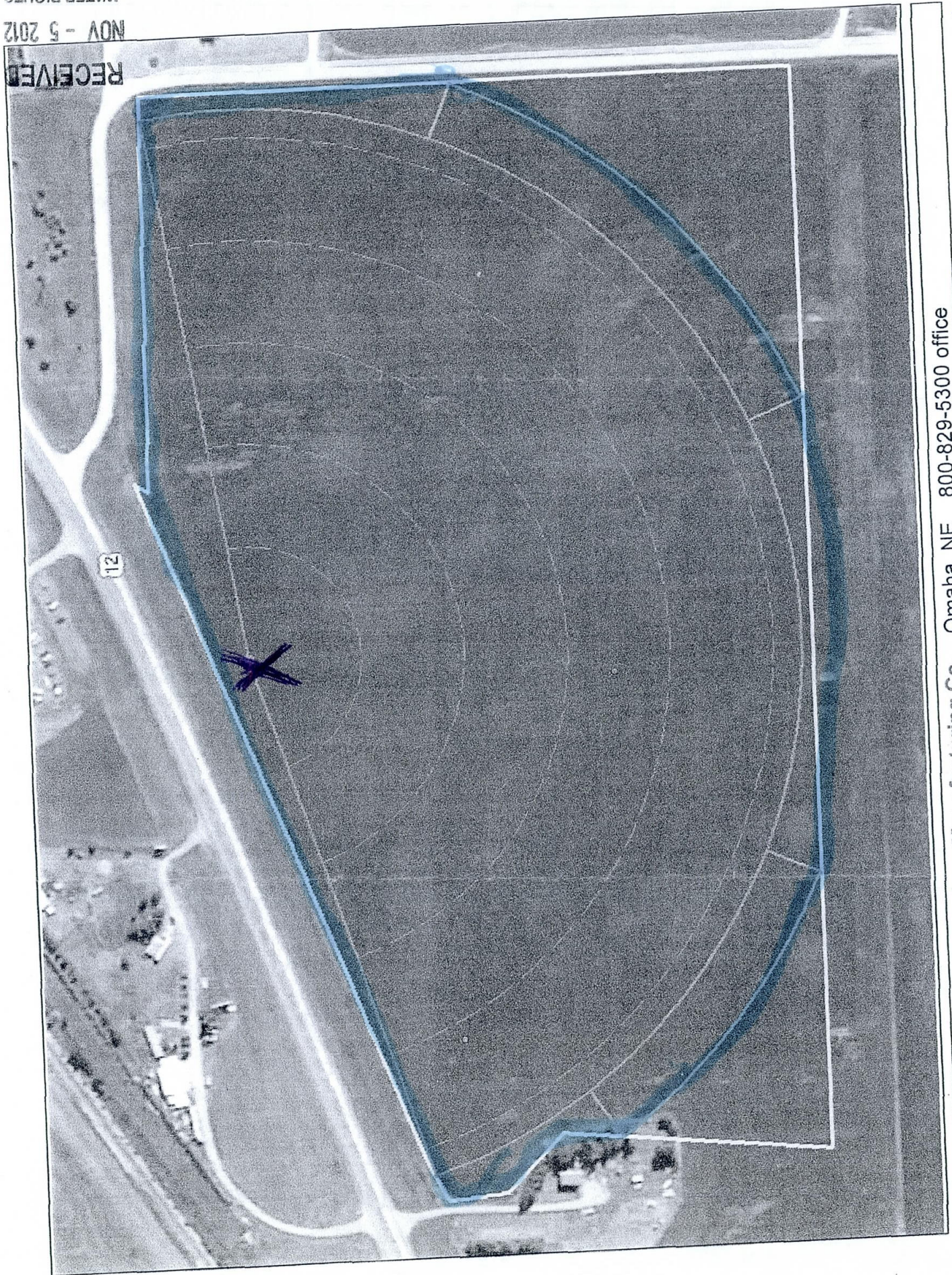
Sec 25
T121N
R47W

Sec 30
T121N
R46W

Sec 29
T121N
R46W

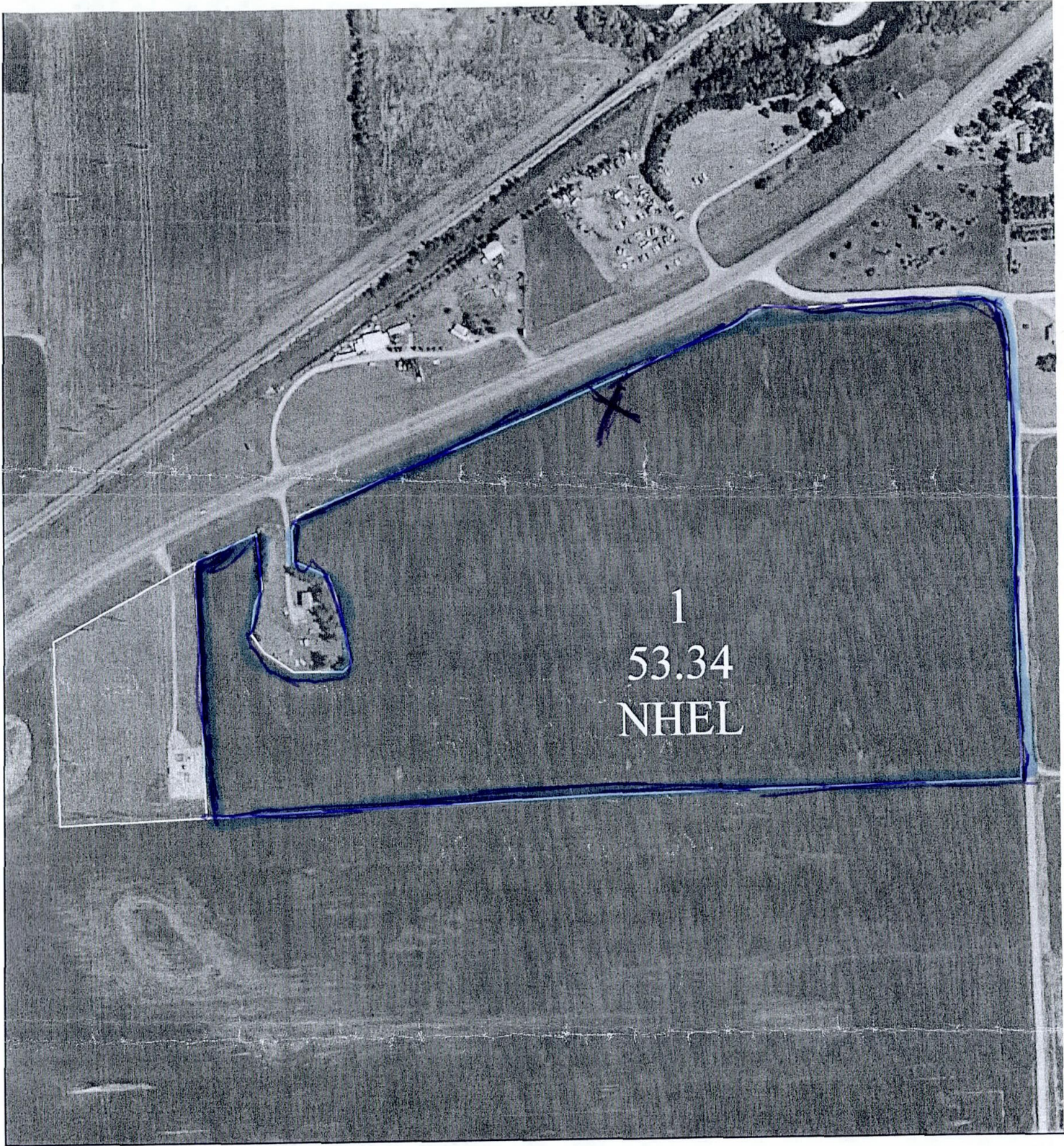


RECEIVED
NOV - 5 2012
WATER RIGHTS
PROGRAM



Lindsay Manufacturing Co. Omaha, NE 800-829-5300 office

SAME field with drawing of proposed area for irrigation



United States Department of Agriculture
Farm Service Agency

Grant County SD
#2477 T3335
Big Stone TWP
NWNE;NENW SEC 19



RECEIVED

NOV - 5 2012

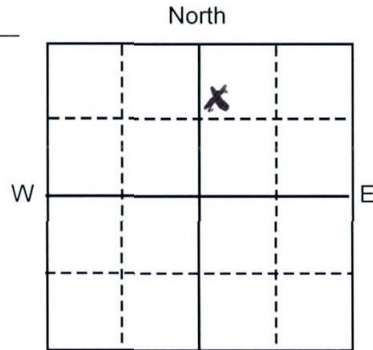
WATER RIGHTS
PROGRAM

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area.
Refer to your original determination (CPA-026 and attached maps) for exact wetland
boundaries and determinations, or contact NRCS.

*Area Hi lited
in it is ~~the~~ own*

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW 1/4 NE 1/4 Sec 19 Twp 121N Rg 46WCounty GrantPlease mark well
location with an "X"

Well Completion Date

NA this is test hole

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
1,000.0 ft. from septic (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>12.00</u> IN	<u>0.0</u> FT	<u>78.0</u> FT	<u>18.00</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Quick Grout</u>	<u>16</u>	<u>Lb/gal</u>	<u>0.0</u> Ft	<u>100.0</u> Ft
		<u>Lb/gal</u>	<u>Ft</u>	<u>Ft</u>

Describe grouting procedure
pressure tremmi

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 12.00 Inches Length 15.0 Feet
 Material stainless steel
 Slot Size 80 Set From 78.0 Feet to 93.0 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? granular
☐ No, Why Not?
Lab to which water
quality sample sent for analysisWell Owner: Rusty Dimberg

Business Name:

Address: 41274 US Hwy 75City, State, Zip: Ortonville MN 56278

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
soil black S	0	1
clay boulder tan H	1	12
clay tan s	12	23
clay blue s	23	65
sand clay blue s	65	74
sand white s	74	93
clay blue m	93	100

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: NA
☐ Bailed

☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

Well not drilled yet this is the test hole and anticipated construction

This well was drilled under license # 463 and this report is true and accurate.Drilling firm: Steffl Drilling & Pump Inc

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

10/26/12

RECEIVED
NOV - 5 2012
WATER RIGHTS
PROGRAM

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 11/5, 20 12

RECEIVED OF Rusty Dimberg dba HRDIII Farms 41274 US Hwy 75 Ortonville MN 56278

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

Fee for Application for Permit No. <u>7529-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	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>7529-3</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	700 00

No. 05676

By

Charles E. White
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

November 6, 2012

Rusty Dimberg
41274 US Hwy 75
Ortonville MN 56278

Dear Mr. Dimberg:

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

- Enclosed are copies of the aerial photo maps submitted with the application. The map needs to reference a government section corner or quarter corner including section, township and range. For your use, I have enclosed a map with those designations. Please outline the 36 acres to be irrigated and mark the proposed well location with an "X".
- It appears the 36 acres will be located in the NW 1/4 NE 1/4 and the NE 1/4 NW 1/4 Section 19-T121N-R46W. Do you agree?

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



Minnesota Association of Townships

805 Central Avenue East • PO Box

St. Michael, Minnesota 55376

763-497-2330 • 1-800-228-0296

www.mntownships.org

RECEIVED

NOV 26 2012

WATER RIGHTS
PROGRAM

TO: DEUR Attn: Keren Schlaak

From sending back the maps that you sent me with an "X" marking the spot of the well.

Also there is a map outlining where the land where the irrigation of land is I will outline that area

I also agree that description of land is NW $\frac{1}{4}$ NE $\frac{1}{4}$ and the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 19 - T121 - R46W is correct.

Sincerely

Rusty Dierberg

PS If you have any other questions contact me or call me 320 305 1555



**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. 7529-3, Rusty Dimberg**

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. 7529-3, Rusty Dimberg, 41274 US Hwy 75, Ortonville MN 56278.

The Chief Engineer is recommending APPROVAL of Application No. 7529-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7529-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7529-3 authorizes a maximum diversion rate of 0.89 cfs for the irrigation of 36 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
January 24, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7529-3
RUSTY DIMBERG
JANUARY 11, 2013

Water Permit Application No. 7529-3 proposes to appropriate up to 72 acre-feet per year (ac-ft/yr) at a maximum diversion rate of 0.89 cubic feet of water per second (cfs) from one well to be completed into the "Veblen aquifer." The well is expected to be approximately 100 feet deep and is to be located in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 19, T121N-R46W. This permit application proposes to irrigate 36 acres located in the NW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 19, T121N-R46W in Grant County. The application proposes a diversion rate in excess of the statutory limit of one cfs per 70 acres.

AQUIFER: "Veblen aquifer" (VEB)

GEOLOGY AND AQUIFER CHARACTERISTICS:

Hedges and others (1982) described the Veblen aquifer as extending from the North Dakota and South Dakota border, then from Marshall through Grant Counties in South Dakota, to the South Dakota and Minnesota border, as shown in Figure 1. The Veblen aquifer in Grant County defined by Hedges and others (1982) is estimated to underlie 70,600 acres and contain 211,800 acre-feet (ac-ft) of recoverable water in storage in the county.

Green and Gilbertson (1987) described the Veblen aquifer as being truncated to an area north and west of Big Stone Lake and the Whetstone River, which is in the northeast portion of Grant County, as shown in Figure 2. A lower outwash unit underlying eastern portions and extending further south of the Veblen aquifer as defined by Green and Gilbertson (1987) was identified as the Fairmont aquifer, which was probably included in the Veblen aquifer as defined by Hedges and others (1982).

Hansen (1990) mapped the buried outwash deposits in Grant and Codington Counties, and reported that the Veblen aquifer extends north and west into Roberts and Marshall Counties, south into Deuel County, and east into Minnesota, as shown in Figure 3. In Grant County, the Veblen aquifer as defined by Hansen (1990) is estimated to underlie 260 square miles, the equivalent of 166,400 acres, and contain 700,000 ac-ft of water in storage.

Thompson (2001) delineated the Veblen aquifer with a southern extent approximately 15 miles north the Roberts and Grant County line, indicating no connection with the Veblen aquifer in Grant County defined by Hansen (1990). However, the Wilmot outwash group defined by Thompson (2001) that lies in southeastern Roberts County and appears to extend into northeastern Grant County, as shown in Figure 4, could actually be a portion of the Veblen aquifer defined by Hansen (1990).

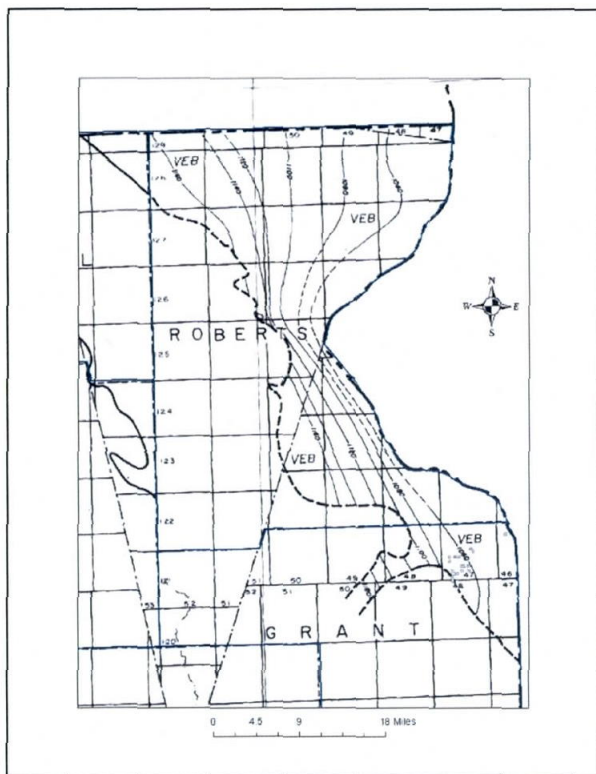


Figure 1: Veblen aquifer defined by Hedges and others (1982)

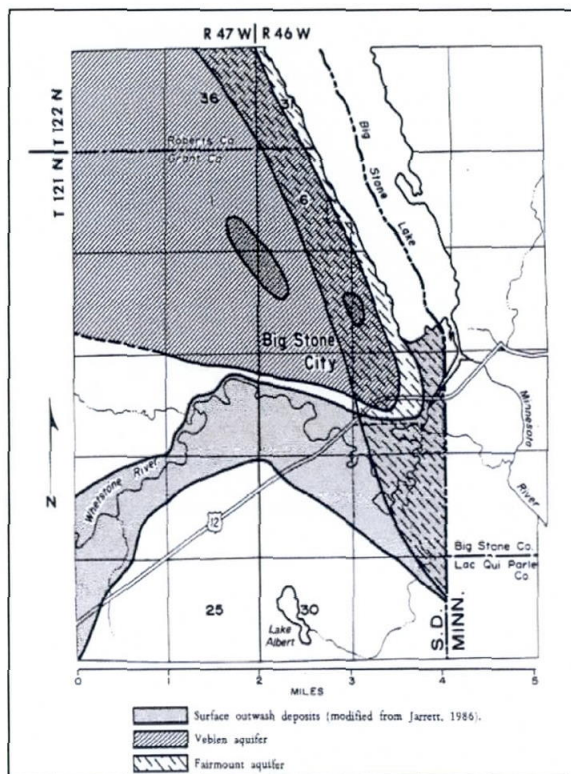


Figure 2: A Portion of the Veblen aquifer and Fairmount aquifer defined by Green and Gilbertson (1987)

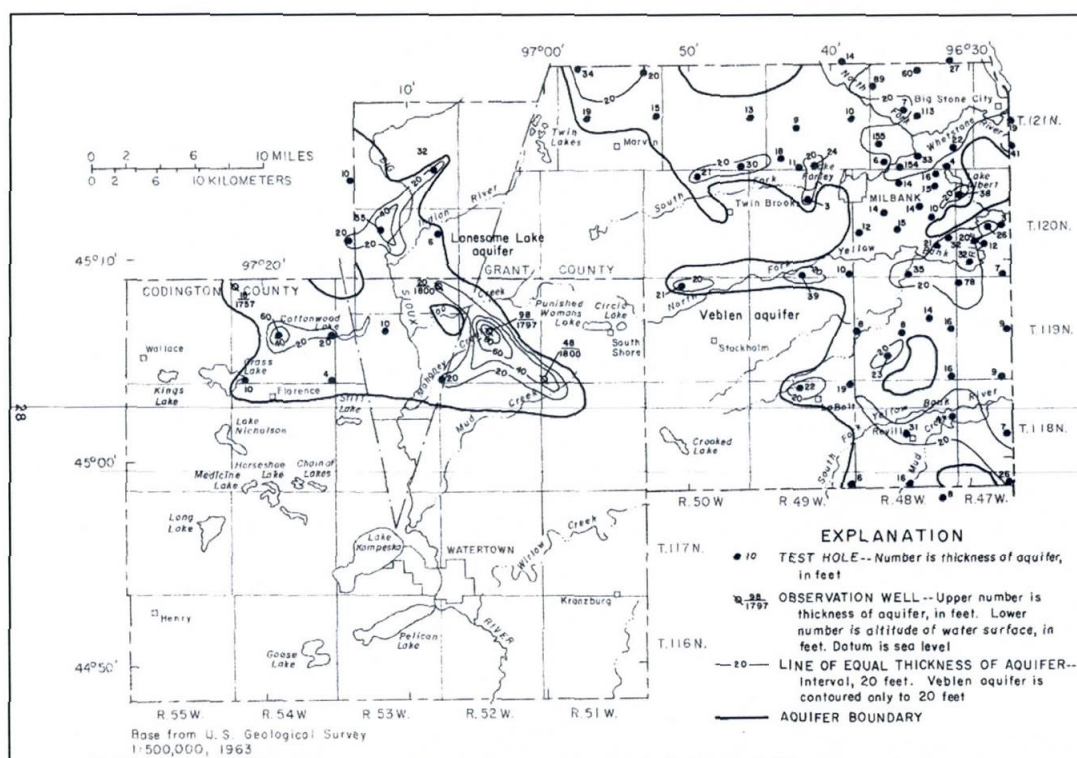


Figure 3: Veblen aquifer in Grant County defined by Hansen (1990)

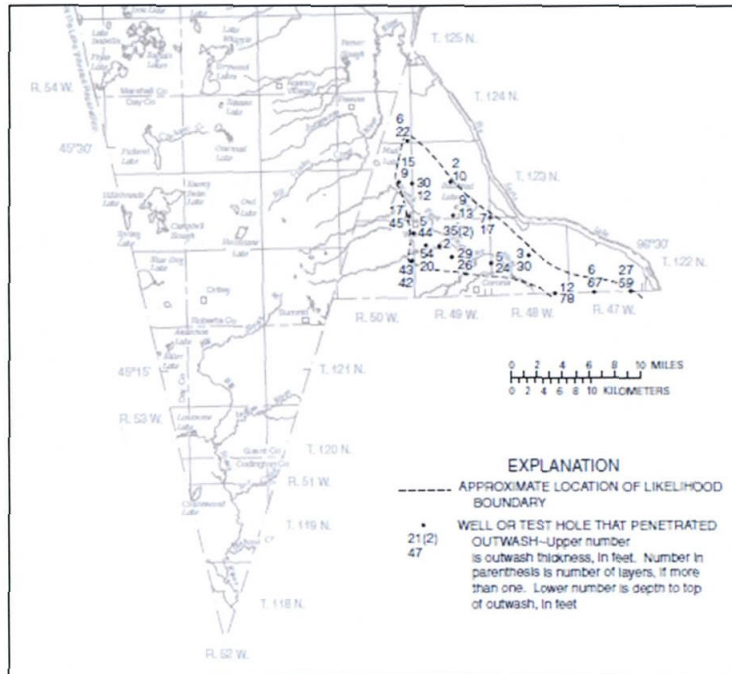


Figure 4: Wilmot outwash group in Roberts County defined by Thompson (2001)

Barr Engineering conducted a groundwater investigation for Water Permit No. 6846-3. Barr Engineering (2007) further delineated the Veblen aquifer, as shown in Figure 5, which has similar areal extents as the Veblen aquifer defined by Hansen (1990). In most cases, however, Barr Engineering (2007) reported the saturated thickness of the aquifer was less than the thickness estimated by Hansen (1990), which may be due to distinctions between layers of sand and gravel deposits.

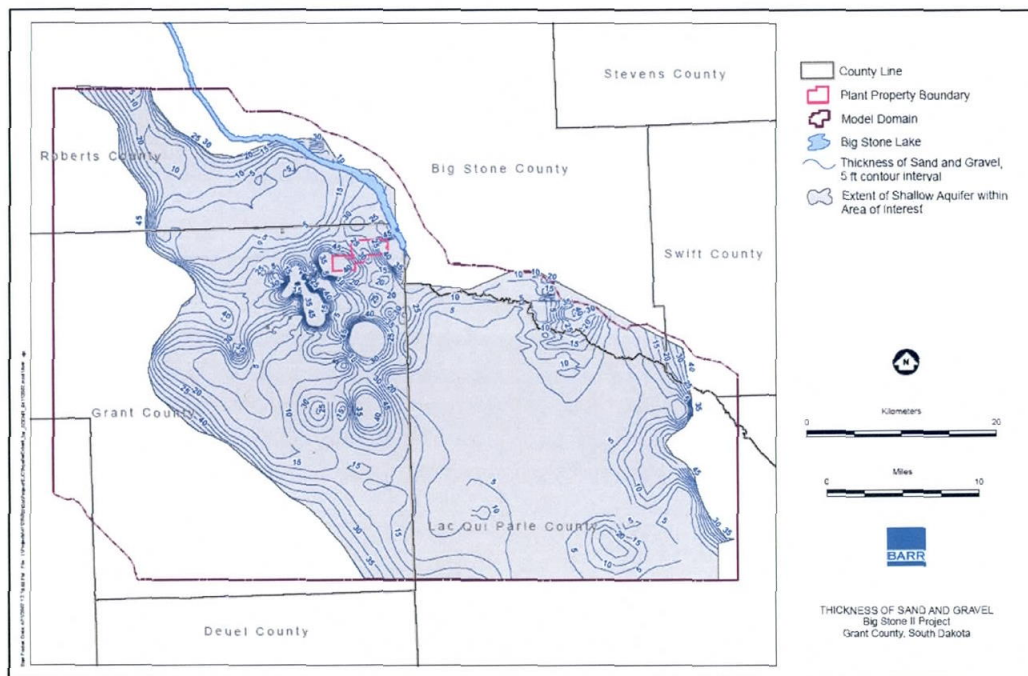


Figure 5: Veblen aquifer defined by Barr Engineering (2007)

For the purposes of appropriations by the SD DENR-Water Rights Program and the Water Management Board, the "Veblen aquifer" can be considered as the group of buried outwash deposits in Grant County that are found within the areal extent and interval of altitude defined by Hansen (1990). This "Veblen aquifer" probably includes the Fairmont aquifer defined by Green and Gilbertson (1987) and the Wilmot outwash group defined by Thompson (2001) (Buhler, 2007).

The "Veblen aquifer" is predominantly a buried outwash, consisting of medium to coarse sand and fine gravel that is mostly under confined conditions (Hansen, 1990). Hansen (1990) reported a range in aquifer depth below land surface of one to 210 feet below ground surface, an average aquifer thickness of 28 feet, and an average static water level of 29 feet below ground surface.

In the area of the proposed well site, the ground surface is 1,055 feet above mean sea level (msl), and the potentiometric surface of the aquifer is at approximately 1,000 feet above msl (Barr Engineering 2007; Hansen, 1990). Barr Engineering (2007) reported that in the area of the proposed well site the top of the aquifer is found at approximately 50 feet below ground surface and the aquifer is approximately ten feet thick. Groundwater movement is generally from northwest to southeast, and toward the Whetstone River in the area of the proposed well site (Hansen, 1990).

A test hole log submitted with this application indicates top soil at ground surface, layers of clay from 12 to 74 feet below ground surface, sand from 74 to 93 feet below ground surface, then clay again. Well completion reports in the area completed into the "Veblen aquifer" document similar stratifications, with the sand layer at 60 to 75 feet below ground surface and 118 to 132 feet below ground surface (Water Rights, 2013c).

It should be noted that a well completion report in the area reported a sand layer at 18 to 28 feet below ground surface with a static water level of eight feet below ground surface. This is likely an outwash lens that is not hydraulically connected to the "Veblen aquifer." Green and Gilbertson (1987) stated that in this area deposits consists of till and outwash; till could contain pockets of sand and gravel but are not typically a good source of water, while outwashes consist of stratified sand and gravel and are usually good aquifers.

SDCL 46-2A-9

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

WATER AVAILABILITY:

This application proposes to appropriate 72 ac-ft/yr from the "Veblen aquifer". If this application is approved, the actual water use will likely be less than the appropriation. The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the

best information reasonably available, it is probable 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.”

HYDROLOGIC BUDGET:

Recharge:

Recharge to the “Veblen aquifer” occurs due to direct infiltration of precipitation in areas where the aquifer is at or near land surface and leakage from till (Hansen, 1990). Hedges and others (1985) estimated the recharge rate for the “Veblen aquifer” as 0.24 inches per year (in/yr) for confined portions and 5.2 in/yr for unconfined portions. So, the actual average recharge rate for the “Veblen aquifer” is probably within this range, and because the aquifer is mostly confined, the recharge rate is probably near the confined portions estimate.

Discharge:

Discharge from the “Veblen aquifer” occurs due to outflow to local lakes and rivers, specifically the Whetstone River in the area of the proposed well site, and well withdrawals from municipal, institutional, industrial, and irrigation use (Hansen, 1990; Water Rights, 2013b). Currently, a total of 34 water rights/permits authorize groundwater withdrawal from the “Veblen aquifer,” with 32 of these water rights/permits located in Grant County (Water Rights, 2013b).

Current diversion rate authority for non-irrigation use totals 6.403 cfs. The amount of water that can be expected to be withdrawn by the non-irrigation use water rights/permits at the current appropriation amount can be estimated by assuming water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time. Therefore, the total annual withdrawal from the “Veblen aquifer” in Grant County by non-irrigation use limited by diversion rate is expected to total less than 2,782 ac-ft/yr (Water Rights, 2013b).

Water Permit No. 6846-3 Otter Tail Power Company is the only water right/permit limited by annual volume. The permit appropriates up to 10,000 ac-ft/yr, with a maximum average annual withdrawal of 4,700 ac-ft/yr over a 20 year period. Currently, no water use has been reported as required by the permit and the permit may therefore be subject to cancellation due to non-construction or nonuse pursuant to ARSD 74:02:01:36 and ARSD 74:02:01:37. This matter will be addressed at the March, 2013 Water Management Board meeting. Due to these circumstances, there is no expected withdrawal from the “Veblen aquifer” in Grant County by non-irrigation use limited by an annual volume (Water Rights, 2013b).

The remainder of the water rights/permits authorize irrigation use. Figure 5 shows the “Veblen aquifer’s” historic irrigation data in Grant County. The development of the aquifer has remained consistent over the period of record. Annual withdrawal tends to fluctuate, which is probably due mostly to annual growing season climatic conditions. The average pumpage reported equals 852 ac-ft/yr. The maximum pumpage reported was in 1981 for 1,747 ac-ft/yr. (Water Rights, 1979-2011).

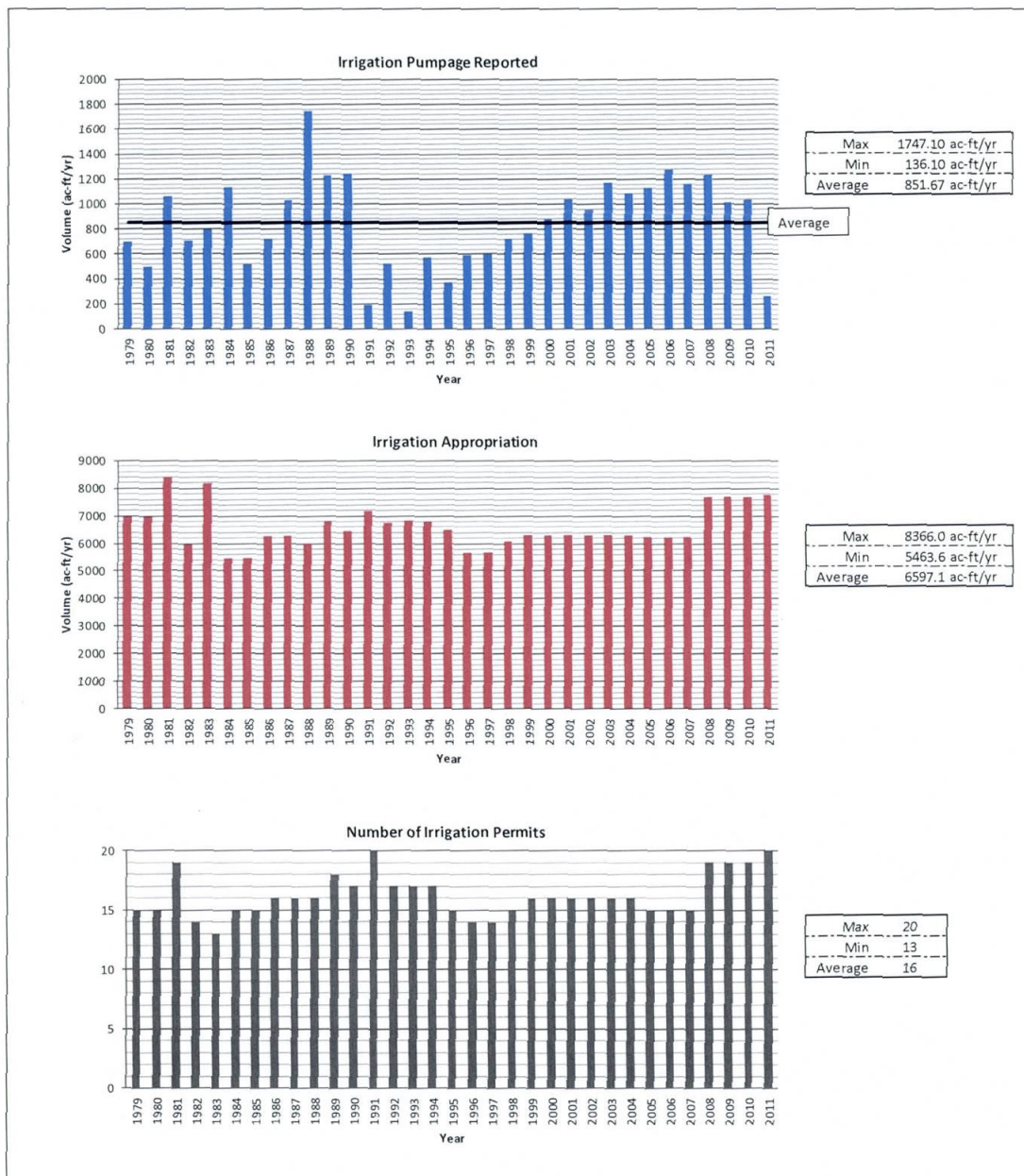


Figure 5: Historic irrigation water use from the “Veblen aquifer” in Grant County (Water Rights, 1979-2011)

In addition, there are many well completion reports on file with the SD DENR-Water Rights Program in Grant County for domestic wells that appear to be completed into the “Veblen aquifer” (Water Rights, 2013c). The annual withdrawal due to domestic use is not significant to the hydrologic budget of the aquifer.

Water Balance:

The annual discharge from the “Veblen aquifer” in Grant County due to well withdrawal is estimated to be at maximum 4,530 ac-ft/yr, but the actual annual pumpage will often be much less. Using potential maximum annual withdrawal creates the most conservative estimate. To balance the hydrologic budget, recharge must equal withdrawal. At the maximum potential

annual withdrawal, plus the maximum withdrawal proposed by this application, recharge must equal 0.34 in/yr to balance this hydrologic budget. This recharge rate is within the recharge range, and is actually nearer the confined portions estimate, provided from Hedges and others (1985). Therefore, there is a reasonable probability that unappropriated water is available from the “Veblen aquifer” for the proposed appropriation of 72 ac-ft/yr.

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 SD DENR-Water Rights Program monitors 34 observation wells completed into the “Veblen aquifer”, with 15 of these observation wells located in Grant County. The nearest of these wells, GT-77O, and GT-77N are located approximately two and a half miles southwest and three and a half miles west of the proposed well site, respectively. Observation well GT-77O is under water table conditions and GT-77N is under artesian conditions. Hydrographs of these observation wells are shown in Figures 6 and 7 (Water Rights, 2013a).

The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years. The hydrographs also show the effects of nearby pumping on the aquifer. Observation well data indicates that, at the current level of development, temporal well withdrawal is masked by climatic conditions, indicating that recharge to and natural discharge from the aquifer greatly exceeds well withdrawal. Therefore, unappropriated water is available from this area of the “Veblen aquifer” to support the proposed appropriation of 72 ac-ft/yr.

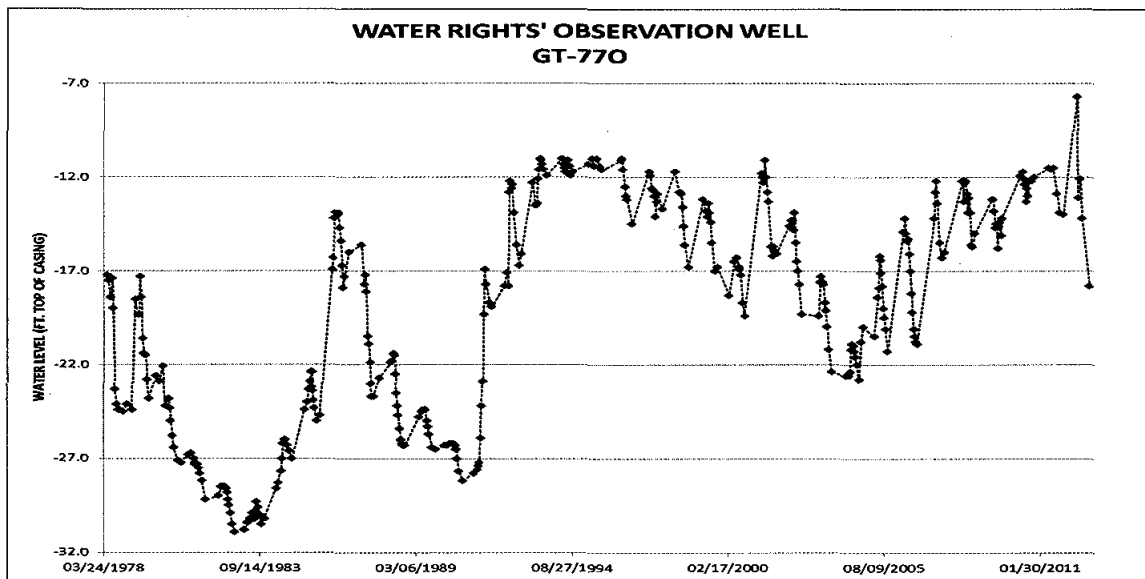


Figure 6: Hydrograph for SD DENR-Water Rights' observation well GT-77O (Water Rights, 2013a)

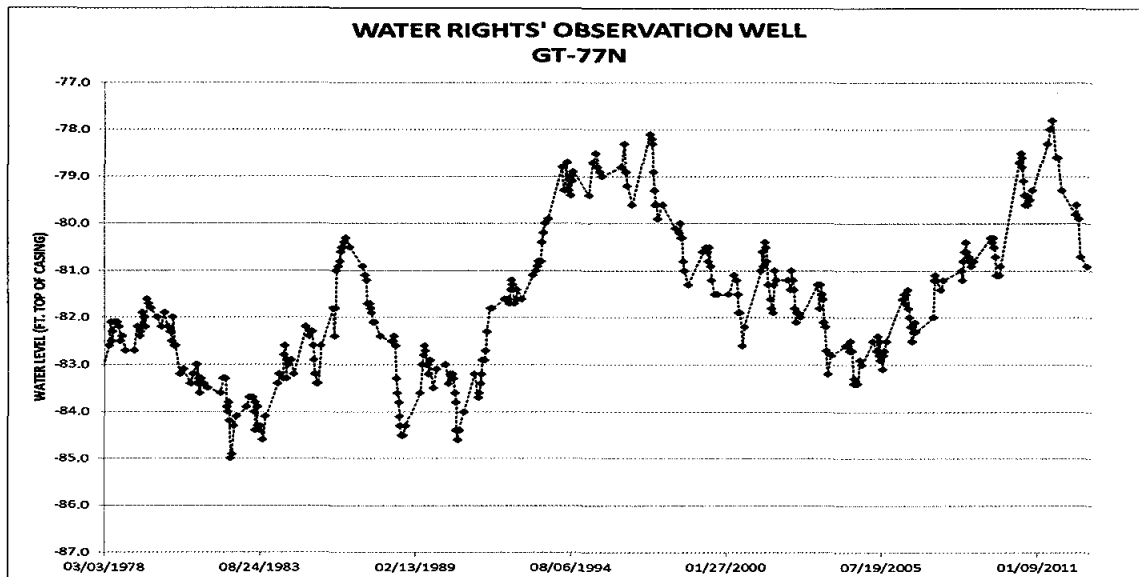


Figure 7: Hydrograph for SD DENR-Water Rights' observation well GT-77N (Water Rights, 2013a)

EXISTING WATER RIGHTS:

There are 32 water rights/permits appropriating water from the "Veblen aquifer" in Grant County; two of these are located within one mile of the proposed well site, Water Right No. 4050-3 Big Stone City and Water Right No. 6161-3 Lou's Greenhouse. The next nearest water right/permit is located two miles from the proposed well site, Water Permit No. 6846-3 Otter Tail Power Company; however, the permit is subject to cancellation as previously discussed (Water Rights, 2013b). There are several well completion reports on record with the SD DENR-Water Rights Program for domestic wells within mile of the proposed well site that appear to be completed into the "Veblen aquifer" (Water Rights, 2013c).

The "Veblen aquifer" appears to be confined in the area of the proposed well site; therefore, some drawdown due to pumping is likely. Hansen (1990) and Barr Engineering (2007) reported that potentiometric surface of the aquifer in the area of the proposed well site is 1,000 feet above msl. The test hole log submitted with the application document aquifer materials at 74 to 93 feet below ground surface. Since the ground surface elevation is at 1,055 feet above msl in this area, approximately 20 feet of head pressure is expected in the area of the proposed well site.

As previously discussed, the hydrographs for observation wells completed into the "Veblen aquifer" document the effects of pumping; however, these are minimal relative to climatic conditions. In the time period of one year, water levels generally fluctuate only a few feet. Over the entire period of record, water levels in the three nearest observation wells fluctuated at maximum 25 feet (Water Rights, 2013a). This amount of fluctuation is probably the worst case scenario for the aquifer in this area.

Considering that SDCL 46-6-6.1 does not protect artesian head pressure as a means of delivery and the Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur, a nearby adequate well defined by ARSD 74:02:20(7), which states that the pump intake must be set 20 feet below the top of the

aquifer or, if the aquifer is less than 20 feet thick, as near to the bottom of the aquifer as is practical, is not expected to be adversely or unlawfully impaired. Therefore, there is a reasonable probability that any well interference from the proposed appropriation will not cause a significant impact and will also not adversely or unlawfully impair existing users.

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cubic foot of water per second for every seventy acres, or "the equivalent thereof." The statute provides that the Water Management Board may allow a greater diversion if the method of irrigation so requires.

This water permit application proposes to divert at a rate of 0.89 cfs per 36 acres, equaling 1.73 cfs per 70 acres. The application indicates that proposed pivot will not make a full rotation. This requested diversion rate is probably an operational requirement of the equipment that is unrelated to the amount of rotation and subsequent area of land irrigated. Further justification for the diversion rate in excess of the statutory limit was not provided.

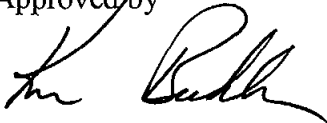
CONCLUSIONS:

1. The application proposes to appropriate 72 ac-ft/yr for irrigation; however, the actual use will likely be less.
2. There is a reasonable probability that unappropriated water is available from the "Veblen aquifer" to supply the proposed appropriation.
3. There is a reasonable probability that this proposed well will not cause interference in existing nearby wells.
4. This application has requested an additional diversion rate in excess of one cfs per 70 acres.



Joseph R. Stonesifer
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Barr Engineering. 2007. Groundwater Supply Evaluation, Big Stone II Project, Grant County, South Dakota: Prepared for Otter Tail Power Company
- Buhler, K. 2007. Report on Water Permit Application No. 6846-3 for Otter Tail Corporation: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Green, S. and Gilbertson J.P. 1987. Ground-water Investigation for Big Stone City, South Dakota. South Dakota DENR-Geological Survey, Vermillion, SD.
- Hansen, D.S. 1990. Water Resources of Codington and Grant Counties, South Dakota: U.S. Geological Survey Water-supply Paper 2254, 263 p.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J., and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 7: Ground Water Recharge. South Dakota DENR-Geological Survey, Vermillion, SD.
- Thompson, R.F. 2001. Water Resources of the Lake Traverse Reservation, South and North Dakota, and Roberts County, South Dakota: U.S. Geological Survey Water-Resource Investigation Report 01-4219
- Water Rights. 1979-2011. "Annual Irrigation Summary by Aquifer": 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 Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

Printer's Affidavit of Publication

RECEIVED

STATE OF SOUTH DAKOTA
COUNTY OF GRANT

} ss.

FEB - 1 2013

Ann Tuchscherer

WATER RIGHTS
PROGRAM

of said County and State, being first duly sworn, on oath says that the Grant County Review is a legal weekly newspaper of general circulation, printed and published in Milbank, in said County of Grant and State of South Dakota, by Phyllis Justice, and has been such newspaper during the times hereinafter mentioned; that said newspaper is a legal newspaper; and that it has a bona fide circulation of more than two hundred copies weekly, and has been published within said County of Grant in the English language and has been admitted to the United States mail under second class mailing privilege, for at least one year next prior to the publication of the Notice herein mentioned, and has been printed wholly in an office maintained at the said place of publication, that I, the undersigned, _____ Bookkeeper _____ of said newspaper, in charge of the advertising department thereof, have personal knowledge of all the facts stated in this affidavit; that the advertisement headed Notice of

Application No. 7529-3 to Appropriate
Water

_____ a printed copy of which, taken from the paper in which the same was published, is attached to this sheet and is made a part of this Affidavit, was published in said newspaper at least once each week for one ~~successive~~ weeks, on the day of each week on which the said newspaper was regularly published, to-wit:

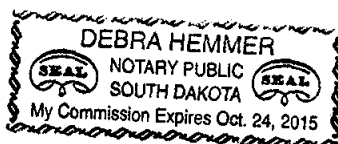
<u>January 30 2013</u>	_____	20
<u>20</u>	_____	20
<u>20</u>	_____	20

That \$ 23.55 _____, being the full amount of the fee charged for the publication of said Notice, inures to the benefit of the publisher of the Grant County Review; that no agreement or understanding for the division thereof has been made with any person, and that no part has been agreed to be paid to any person whomsoever.

Ann Tuchscherer

Subscribed and sworn to before me this 30th day of Jan 20 13

Debra Hemmer
Notary Public, Grant County, South Dakota



NOTICE OF APPLICATION NO. 7529-3 to Appropriate Water

Notice is given that Rusty Dimberg, 41274 US Hwy. 75, Ortonville, MN, 56278, has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from one well to be completed into the Vebien Aquifer (100 feet deep) located in NW 1/4 NE 1/4 Section 19 for irrigation of 36 acres located in the NW 1/4 NE 1/4, NE 1/4 NW 1/4 Section 19; all in T121N-R46W. The applicant is requesting a diversion rate greater than the statutory limit.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7529-3 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 February 11, 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. Firner, Secretary, Department of Environment and Natural Resources.

Published once at an approximate cost of \$23.55.

Publication Fee \$ 23.55
Notarial Fee \$ _____
Total \$ 23.55

RECEIVED

FEB - 4 2013

Form 8

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Codington) SS

I, Monica K. Saathoff

certify that the attached printed Notice was
taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was
published

in the newspaper on the following date:

January 30th, 2013

Cost of Printing 58.74

Monica K. Saathoff
(Signature)

Bookkeeper

(Title)

January 30th, 2013

(Date Signed)

DEPARTMENT OF ENVIRON- MENT AND NATURAL RESOURCES

NOTICE OF APPLICATION NO. 7529-3 to Appropriate Water

Notice is given that Rusty Dimberg, 41274 US Hwy 75, Ortonville, MN 56278 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from one well to be completed into the Veblen Aquifer (100 feet deep) located in NW 1/4 NE 1/4 Section 19 for irrigation of 36 acres located in the NW 1/4 NE 1/4, NE 1/4 NW 1/4 Section 19; all in T121N-R46W. The applicant is requesting a diversion rate greater than the statutory limit.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7529-3 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 February 11, 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 approximate cost of \$53.75.
(January 30, 2013)

All legal notices in the Public Opinion and other South Dakota newspapers can be found at
www.sdpublicnotices.com



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

January 24, 2013

Grant Co Review
PO Box 390
Milbank SD 57252

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7529-3 to Appropriate Water. Please publish the notice once on January 30, 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 Rusty Dimberg, 41274 US Hwy 75, Ortonville MN 56278 (Ph # 320-839-3807).

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

January 24, 2013

Public Opinion
PO Box 10
Watertown SD 57201

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7529-3 to Appropriate Water. Please publish the notice once on January 30, 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 Rusty Dimberg, 41274 US Hwy 75, Ortonville MN 56278 (Ph # 320-839-3807).

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

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

January 24, 2013

Rusty Dimberg
41274 US Hwy 75
Ortonville MN 56278

Dear Mr. Dimberg:

Water Permit Application No. 7529-3 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 Grant Co. Review printed at Milbank SD (Ph # 605-432-4516) and the Public Opinion printed at Watertown SD (Ph # 605-886-6901). 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 30, 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. 7529-3 to Appropriate Water

Notice is given that Rusty Dimberg, 41274 US Hwy 75, Ortonville MN 56278 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from one well to be completed into the Veblen Aquifer (100 feet deep) located in NW 1/4 NE 1/4 Section 19 for irrigation of 36 acres located in the NW 1/4 NE 1/4, NE 1/4 NW 1/4 Section 19; all in T121N-R46W. The applicant is requesting a diversion rate greater than the statutory limit.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7529-3 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 February 11, 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 _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

MAR 28 2013

Rusty Dimberg
41274 US Hwy 75
Ortonville MN 56278

Dear Mr. Dimberg:

Enclosed is Water Permit No. 7529-3 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,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

7529-3

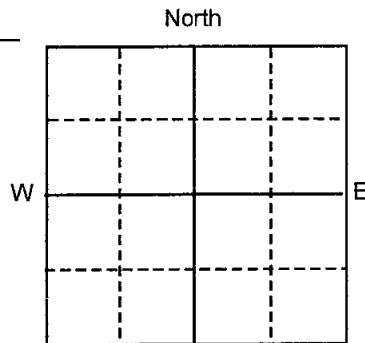
SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW ¼ NE ¼ Sec 19 Twp 121 Rg 46

County GRANT

Please mark well
location with an "X"

Well Completion Date

March 24, 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:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	0.0 FT	85.0 FT	18.00 IN
LB/FT	12.00 IN	91.0 FT	96.0 FT	18.00 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
quick grout	28	Lb/gal	0.0 Ft	75.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
red flint#90 75.0 96.0

SCREEN:

☐ Perforated pipe ☒ Manufactured

Diameter 12.00 Inches Length 6.0 Feet

Material stainless steel

Slot Size 90 Set From 85.0 Feet to 91.0 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: Rusty Dimberg

Business Name:

Address: 41274 US Hwy 75

City, State, Zip: Ortonville MN 56278

WELL LOG:

		DEPTH	
FORMATION		FROM	TO
topsoil	black	0	2
gravel	boulders tan	2	13
clay	tan	13	24
clay	blue	24	55
sand/clay		55	60
clay	blue	60	79
sand	tan/blue	79	91
clay	blue	91	96

STATIC WATER LEVEL 50.0 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

83' 11.5" Ft. After 5 Hrs. pumped 65 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Prod #2
45 16 59.4N
96 28 53.4W

Kris VanHeuveln

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

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 4-12-13

7529-3

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

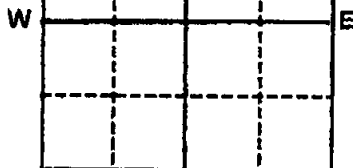
Location NW ¼ NE ¼ Sec 19 Twp 121N Rg 46W

County Grant

North

Please mark well
location with an "X"

Amended 3 17 2014



Well Completion Date

Jan 15, 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

☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	1.0 FT	76.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Quick Grout	12	Lb/gal	0.0 Ft	66 Ft
Red Flint		Lb/gal	66.0 Ft	93.0 Ft

Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 12.00 Inches Length 17.0 Feet
 Material stainless steel
 Slot Size 80 Set From 76.0 Feet to 93.0 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: Rusty Dimberg

Business Name:

Address: 41274 US Hwy 75

City, State, Zip: Ortonville MN 56278

WELL LOG:

			DEPTH	
FORMATION			FROM	TO
top soil	blk	S	0	1
gravel	rocks	M-H	1	17
clay	tan	M	17	23
clay	blue	M-H	23	65
sandy clay	blue	M	65	74
sand		M	74	93

STATIC WATER LEVEL 63.0 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:
☐ Bailed
☐ Other

Pumping Level Below Land Surface

77.5 Ft. After 15.0 Hrs. pumped 150.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

 Production Well #1
 45 18 58.4
 98 28 57.7
 Elev 1038

 RECEIVED
 MAR 18 2014
 WATER RIGHTS
 PROGRAM
This well was drilled under license # 463 and this
report is true and accurate.

Drilling firm: Steffi Drilling & Pump Inc/Kris VanHeuvelen

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

2-25-13

**SOUTH DAKOTA
WATER PERMIT NO. 8078-3**

Date of first receipt of application January 20, 2015.

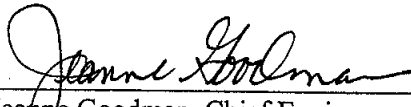
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8078-3 to Rusty Dimberg, 41274 US Hwy 75, Ortonville MN 56278 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 8078-3 authorizes irrigation of 7 new acres. Water Permit No. 7529-3 appropriates 0.89 cubic feet of water per second (cfs) from one well completed into the Veblen Aquifer (100 feet deep) located in the NW 1/4 NE 1/4 Section 19 for irrigation of 36 acres located in the NW 1/4 NE 1/4, NE 1/4 NW 1/4 Section 19; all in T121N-R46W. This permit authorizes irrigation of 7 new acres located in the NE 1/4 NW 1/4 Section 19-T121N-R46W. This permit does not authorize any increase in the diversion rate. Water Permit No. 8078-3 incorporates Water Permit No. 7329-3 and authorizes 0.89 cfs to irrigate 43 acres described above.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.
3. The date from which applicant may claim right is January 20, 2015 (additional 7 acres) and November 5, 2012 (0.89 cfs and 36 acres).
4. The date of approval of Permit No. 8078-3 is April 13, 2015.
5. One-fifth of the construction is to be completed on or before October 13, 2017.
6. All construction is to be completed on or before April 13, 2020.
7. Water is to be put to beneficial use on or before April 13, 2024.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit Nos. 7529-3 and 8078-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit Nos. 7529-3 and 8078-3, combined, authorize a maximum diversion rate of 0.89 cfs for the irrigation of 43 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.
4. Approval of Permit No. 8078-3 incorporates Permit No. 7529-3.

WATER MANAGEMENT BOARD

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

APR 23 2015

date

