

WATER PERMIT NO. 2735-2

Name of Applicant: **Daniel & Paulette Fanning**

Address: **28885 237th Ave, Martin SD 57551** Phone: **605 685-5274**

Amount of Water Claimed: **3.78 cfs** Total Acres: **260 acres**

Source of Water Supply: **groundwater (two wells)**

Water to be used for: **irrigation** County: **Bennett**

Type of Waste Disposal System:

Location: **18 miles northeast of Martin**

PRIORITY Date Received: **12-23-14** Application/License Fee: **\$ 1250**

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

Remarks: **Requesting diversion rate greater than statutory limit**

Diversion Point: **NE 1/4 SW 1/4 and SW 1/4 SE**
1/4 Sec 6-R37N-R34W

Land to be Irrigated: **SW 1/4, S 1/2 NW 1/4, SW**
1/4 NE 1/4 Sec 6-T37N-R34W

Depth of Well: **460 and 450 feet deep**

Well Driller: **Grosch Irrigation Co.**

Remarks:

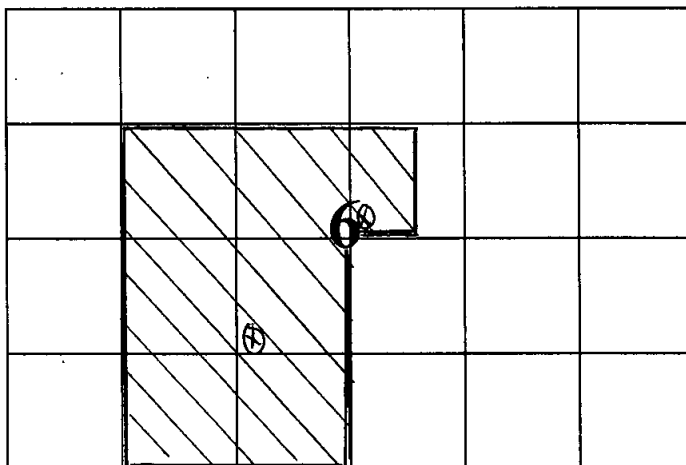
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **12-23-14**

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>2735-2</u>	(office use only) Hydrologic Unit <u>10140203</u>
	Basin <u>White River</u>	
	Newspaper <u>Bennett Co. Booster II Martin</u>	
	<u>Capital Journal Pierre</u>	

RECEIVED

DEC 23 2014

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 Daniel & Paulette Fanning
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent
(name and complete address if different than above name)
- Mailing Address 28885 237th Ave Martin S.D. 57551
(Address) (City) (State) (Zip Code)
- Home Phone 605-685-6472 Cell 605-685-5274 Email dfanning@fbts.com
2. Amount of water claimed 3.79 *CFS or 1700 **GPM ***AF Total Acreage 260
(*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 (NE 1/4 SW 1/4)
4. Location of point of diversion 2 Wells (1 well in SW 1/4 of Sec 6 and 1 well in the NE 1/4 of Sec 6 all in Sec 6. 37th. 34th) County Bennett
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
5. County or counties where water will be used Bennett
6. Annual period during which water is to be used May - Sept 30
7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
40 acres in NE 1/4 of SW 1/4 of Sec 6	40	40 acres in NW 1/4 of SW 1/4 of Sec 6	40
40 acres in SW 1/4 of SW 1/4 of Sec 6	40	40 acres in SE 1/4 of SW 1/4 of Sec 6	40
40 acres in SW 1/4 of NW 1/4 of Sec 6	40	40 acres in SE 1/4 of NE 1/4 of Sec 6	40
20 acres in SW 1/4 of NE 1/4 of Sec 6	20		

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

1. A 140 acre Center Pivot in SW 1/4 of Sec 6. 37th. 34th
2. A 70 acre Center Pivot in S 1/2 of NE 1/4 of Sec 6. 37th. 34th
- Requesting diversion rate greater than statutory Limit.

I, Daniel Fanning, 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. 2735-2**

Date of first receipt of application December 23, 2014.

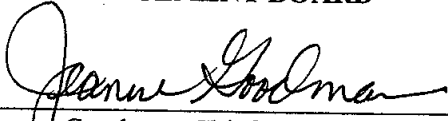
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2735-2 to Daniel & Paulette Fanning, 28885 237th Ave, Martin SD 57551 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2735-2 appropriate 3.79 cubic feet of water per second (cfs) from two wells to be completed into the Ogallala Aquifer (460 and 450 feet deep) located in the NE 1/4 SW 1/4 and the SW 1/4 NE 1/4 Section 6 for irrigation of 260 acres located in the SW 1/4, S 1/2 NW 1/4, SW 1/4 NE 1/4 Section 6; all in T37N-R34W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is December 23, 2014.
4. The date of approval of Permit No. 2735-2 is March 9, 2015.
5. One-fifth of the construction is to be completed on or before September 9, 2017.
6. All construction is to be completed on or before March 9, 2020.
7. Water is to be put to beneficial use on or before March 9, 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

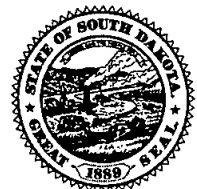
1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 2735-2 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. 2735-2 authorizes a maximum diversion rate of 3.79 cfs for the irrigation of 260 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: 
Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

APR 06 2015

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 Grusch
(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 460 Depth to Top of Water Bearing Material 28 ft Depth to Water from Surface 62 ft
450 44 ft

d) Distance to nearest existing domestic well:

On applicant's property N/A

On property owned by others 1/4 mile

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)

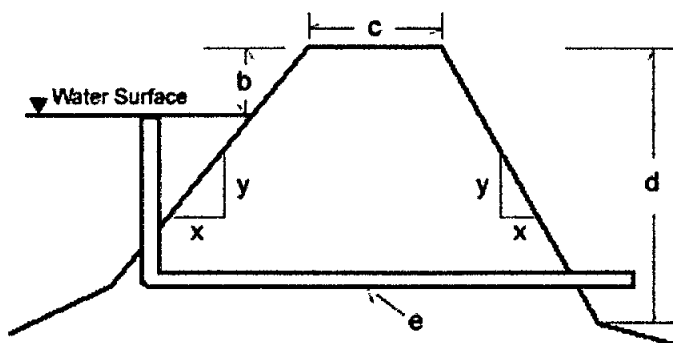
Upstream

Downstream

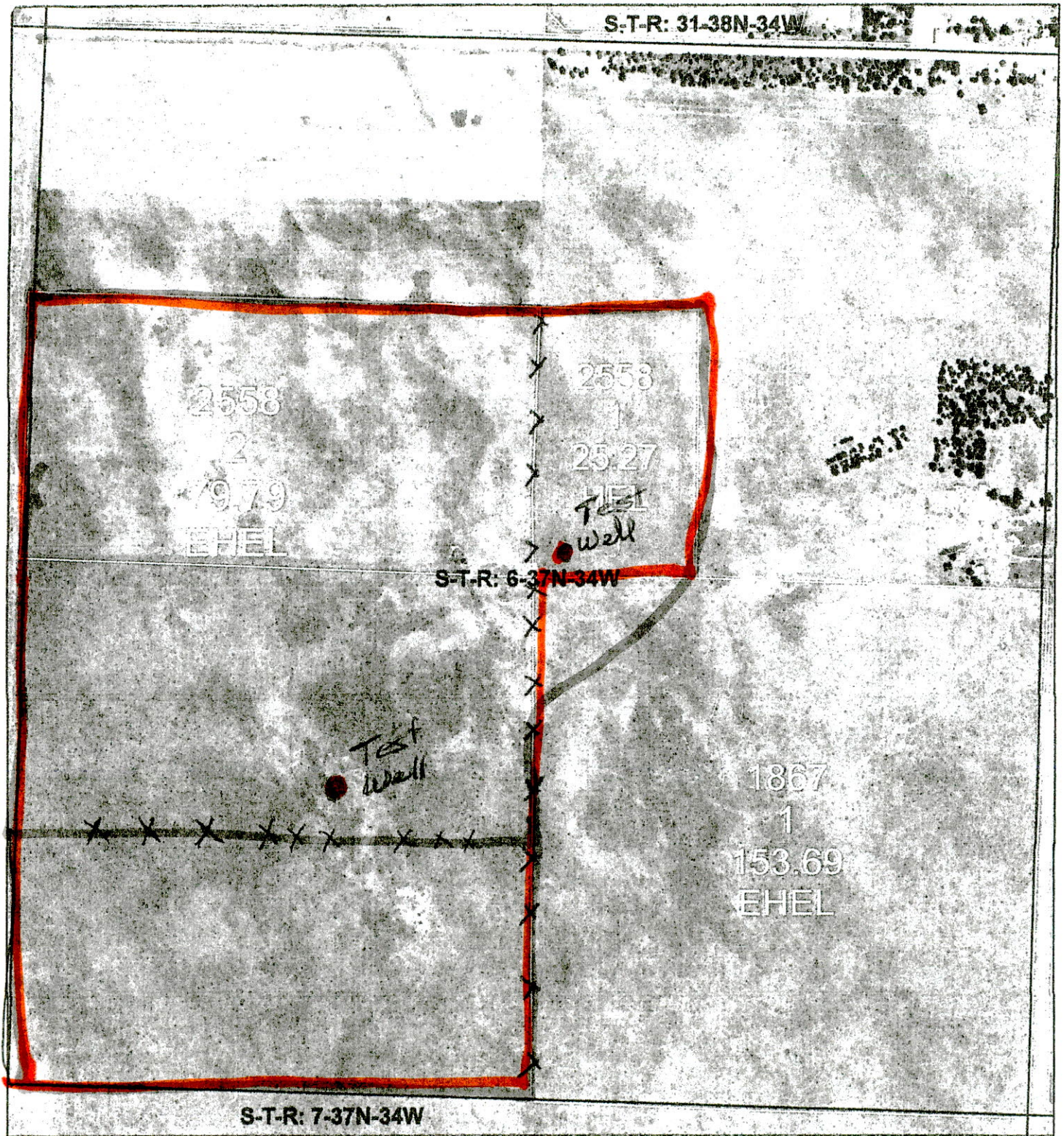
h) Surface Area of Impoundment

i) Storage Acre Feet

j) Drainage Area Above Dam Acres



S-T-R: 31-38N-34W



United States Department of Agriculture
Farm Service Agency

PLSS: 6_37N_34W
Farm: 2450

Bennett County, SD
1:8,128



March 23, 2014

RECEIVED

DEC 23 2014

Wetland Determination Identifiers
● Restricted Use
▽ Limited Restrictions
□ Exempt from Conservation Compliance Provisions

WATER RIGHTS PROGRAM

Common Land Units

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.

2008 Ortho-Photography - Not to Scale

GROSCH IRRIGATION CO., INC.

Branch O'Neill, NE

Date **September 30, 2013**

1 - 13

Name BUTCH FANNING

County **BENNETT CO**

NRD SOUTH DAKOTA CENTER 1/4 6 SEC TN RA

GPS

43D / 12 / 28.8

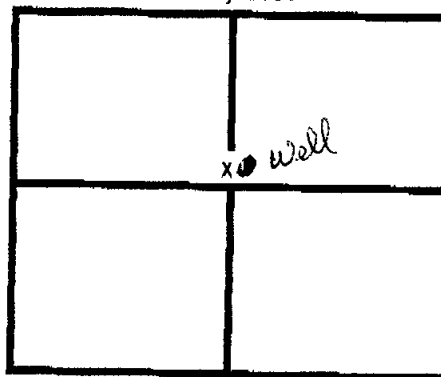
101D / 23 / 04,8

FEET FROM

FEET FROM

ELEVATION

Well #2

[illegible]

DRILLER

Thad Babutzke

RECEIVED

~~DEC 23 2014~~

WATER RIGHTS PROGRAM

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 12/23, 20 14

RECEIVED OF Elm Grove Chanlais 28885 237th Ave Martin SD 57551

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

Fee for Application for Permit No. <u>2735-2</u> to Appropriate Water, to construct and to put water to beneficial use	1050	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>2735-2</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	1250 00

No. 07048

By Jean Goodman
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2735-2, Daniel and Paulette Fanning**

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. 2735-2, Daniel and Paulette Fanning, 28885 237th Avenue, Martin SD 57551.

The Chief Engineer is recommending APPROVAL of Application No. 2735-2 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. 2735-2 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. 2735-2 authorizes a maximum diversion rate of 3.79 cfs for the irrigation of 260 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.

Jeanne Goodman, Chief Engineer
February 18, 2015

**REPORT TO THE CHIEF ENGINEER
WATER PERMIT APPLICATION NO. 2732-2, 2733-2, 2734-2, and 2735-2
DANIEL AND PAULETTE FANNING
FEBRUARY 2, 2015**

Water Permit Application No. 2732-2 proposes to appropriate water from the Ogallala aquifer at a maximum diversion rate of 1.78 cubic feet per second (cfs) from a single well located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31, T38N-R34W. The well will be completed to a depth of approximately 280 feet below ground surface and will be used to irrigate 40 acres in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31, 38 acres in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31, and 22 acres in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31 for a total of 100 acres in Section 2, T38N-R34W. This application is requesting a diversion rate that is greater than the statutory limit.

Water Permit Application No. 2733-2 proposes to appropriate water from the Ogallala aquifer at a maximum diversion rate of 1.78 cfs from a single well located in the NE $\frac{1}{4}$ of Section 2, T37N-R35W. The well will be completed to a depth of approximately 340 feet below ground surface and will be used to irrigate 40 acres in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 2, 40 acres in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 2, and 20 acres in the S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 2 for a total of 100 acres in Section 2, T37N-R35W. This application is requesting a diversion rate that is greater than the statutory limit.

Water Permit Application No. 2734-2 proposes to appropriate water from the Ogallala aquifer at a maximum diversion rate of 2.22 cfs from two wells located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ and the center of the NW $\frac{1}{4}$ of Section 8, T37N-R34W. The wells will be completed to depths of approximately 220 and 180 feet below ground surface and will be used to irrigate 160 acres in the NW $\frac{1}{4}$ of Section 8, T37N-R34W.

Water Permit Application No. 2735-2 proposes to appropriate water from the Ogallala aquifer at a maximum diversion rate of 3.78 cfs from two wells located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ and the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 6, T37N-R34W. The wells will be completed to depths of approximately 460 and 450 feet below ground surface and will be used to irrigate 160 acres in the SW $\frac{1}{4}$ of Section 6, 80 acres in the S $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 6, and 20 acres in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 6 for a total of 260 acres in Section 6, T37N-R34W. This application is requesting a diversion rate that is greater than the statutory limit.

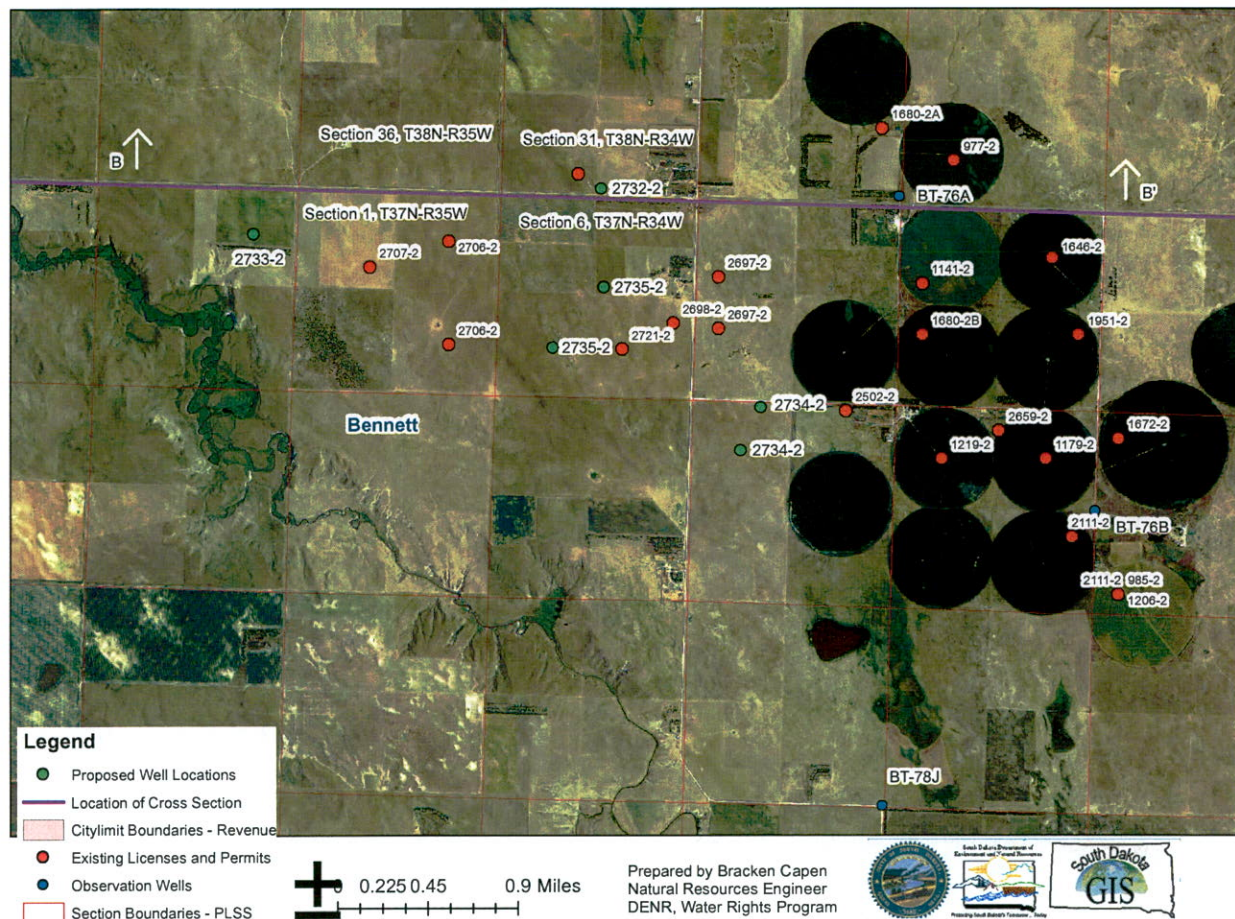


Figure 1: Proposed well locations, existing water rights and permits, and location of B-B' in the geologic cross section shown in Figure 2. (Filipovic 2011; Water Rights, 2015b)

AQUIFER: Ogallala aquifer (OGLL)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The High Plains aquifer system underlies 174,000 square miles of the United States, extending from southern South Dakota to Texas (Gutentag et al., 1984). The High Plains aquifer is generally considered to be composed of upper sandstone units of the Arikaree Formation, the overlying Ogallala and Sand Hills Formations, and any terrace or alluvial deposits, all of which are hydraulically connected (Kolm and Case, 1983). In South Dakota, the High Plains aquifer is considered to include the Arikaree Group, Batesland Formation, Ogallala Group, and overlying alluvial and eolian deposits (Filipovic, 2011). The High Plains aquifer underlies approximately three million acres of South Dakota including all of Bennett County (Filipovic, 2011; Gutentag and others, 1984). For water management purposes, the South Dakota Department of Environment and Natural Resources Water Rights Program, and the South Dakota Water Management Board have historically considered appropriations from the High Plains aquifer either from the Ogallala aquifer or from the Arikaree aquifer. Test hole logs submitted with these applications vary in depth from 180 to 460 feet below ground surface where they terminate at the red Arikaree sandstone.

The Ogallala Formation consists of clays, silts, sands, and surface gravel deposits, and is the most productive part of the High Plains aquifer (Filipovic, 2011; Gutentag and others, 1984). The Ogallala aquifer is estimated to underlie 1,140,360 acres and contains 19,929,600 ac-ft of recoverable water in South Dakota (Allen and others, 1985). The Ogallala aquifer is estimated to underlie 280,960 acres and contains 2,809,600 ac-ft of recoverable water in Bennett County (Allen and others, 1985). In the area of the well sites proposed by these applications, the Ogallala Formation is overlain by eolian deposits. Test hole logs submitted with these applications show unconfined conditions in all instances except the test hole drilled in the NE ¼ of Section 2, T37N-R35W for Water Permit Application No. 2733-2. Taken without context, this test hole log could be said to show confined conditions. However, given that other lithologic logs in the area show unconfined conditions, it is assumed that what could be seen as a confining clay layer is actually a small, disconnected lens of clay locally overlaying the water bearing formation. The static water level in this hole at the time of drilling was approximately 30 feet above the water bearing formation. The static water level was encountered between 32 and 62 feet below ground surface in all submitted test hole logs. These logs also show the saturated thickness in the area of the submitted applications to be between 90 and 210 feet. This is consistent with a cross section of the area created by Filipovic (2011), as seen in Figure 2.

The cross section shown in Figure 2 displays the location of the well proposed by Water Permit Application No. 2732-2 as this well falls on the cross section as defined by Filipovic (2011). The wells proposed by Water Permit Application Nos. 2733-2, 2734-2, and 2735-2 deviate from the location of the cross section (see Figure 1) and are therefore not included in Figure 2.

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(s) 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 from the aquifer and the potential for impairment of existing rights.

WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." If the source of the water is older or lower than the greenhorn formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved and the aquifer is not older or lower than the greenhorn formation. Therefore the withdrawal/recharge issue must be considered.

In applying SDCL 46-6-3.1, the Sixth Judicial Circuit Court ruled in 2005 that if the Water Management Board uses average annual recharge, then it should also use average annual withdrawals to determine if unappropriated water is available from the aquifer (*Hines v. South*

Dakota Dept. of Environ. and Nat'l. Resources, Hughes County 04-37) (Memorandum Decision, April 29, 2005).

A 2012 First Judicial Circuit Court's rulings basically stated that data must be presented to show it is probable the average annual recharge exceeds the average annual discharge by at least the amount requested by the water permit application(s) being considered (*Hanson County Dairy v. Robert Bender and Stace Nelson*) (Memorandum Decision, April 11, 2012).

Later in 2012, the First Judicial Circuit Court stated that in deciding whether or not it is probable that the quantity of water withdrawn will exceed the quantity of the average estimated annual recharge is to be based according to the best information reasonably available, and that nothing in South Dakota law requires a recharge study (*Longview Farms, LLP v. South Dakota Dept. of Environ. and Nat'l. Resources*), (Memorandum Decision, May 17, 2012).

Hydrologic Budget:

Recharge:

Recharge to the Ogallala aquifer occurs mainly through infiltration of precipitation (Filipovic 2011). Hedges and Burch (1985) calculated an average recharge rate of 2.2 to 3.4 inches per year (in/yr) from observation well data and 1.88 in/yr from base flow recession analysis. Kolm and Case (1983) modelled an average recharge rate of 1.3 to 1.8 in/yr. Given this range, recharge to the Ogallala in South Dakota ranges from 124,000 to 323,000 ac-ft/yr with the portion in Bennett County receiving 30,400 to 79,600 ac-ft/yr.

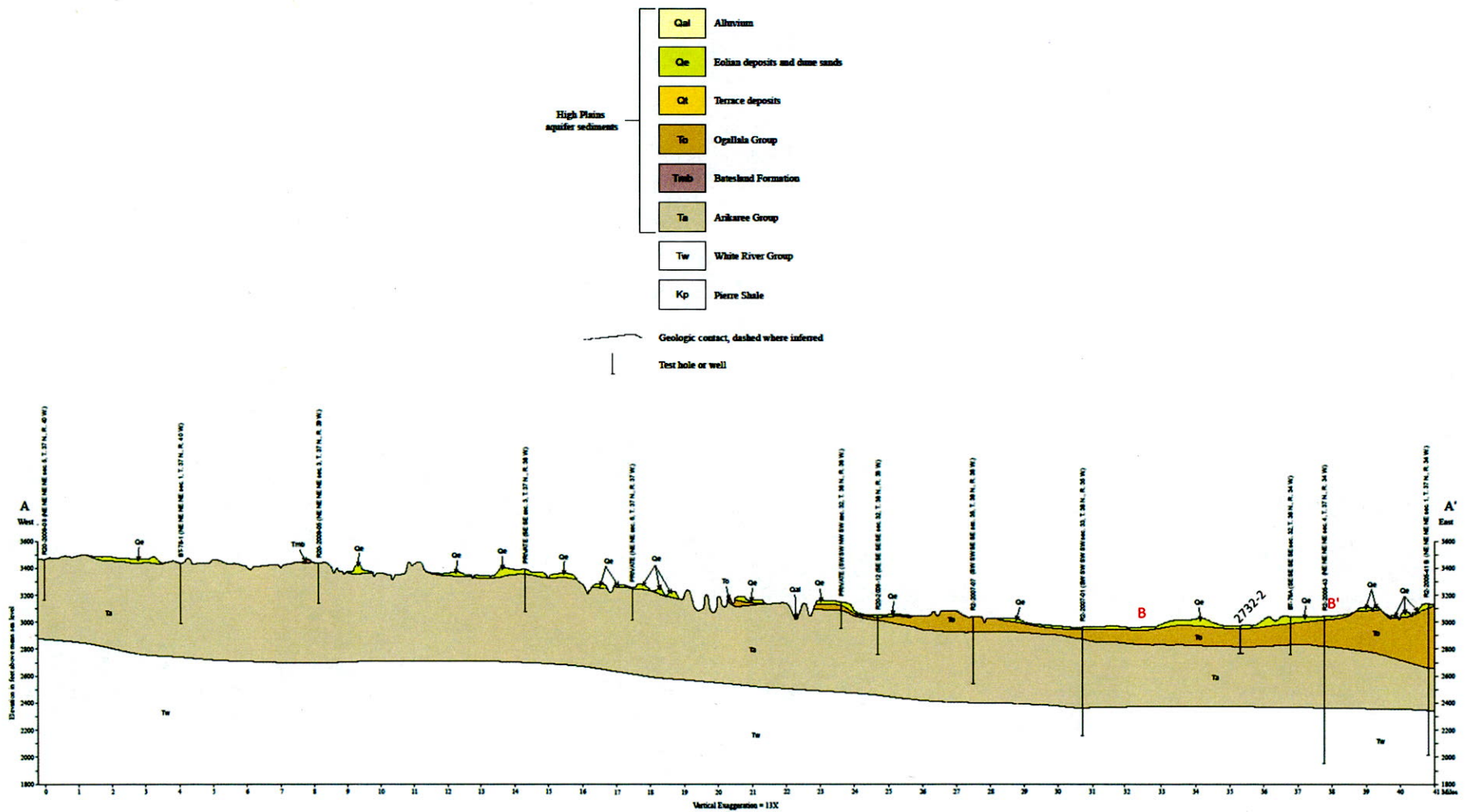


Figure 2: Geologic cross section in Bennett County showing portions of the High Plains aquifer including the Ogallala (Filipovic, 2011) modified to include well location proposed for Water Permit Application 2732-2 and location of B-B' cross section from Figure 1.

Discharge:

Discharge from the Ogallala aquifer occurs through evapotranspiration, seepage from springs, and to streams and rivers such as the Niobrara and the Little White, and well withdrawals (Filipovic, 2011). There are currently 170 water rights/permits appropriating water and three future use permits reserving water from the Ogallala aquifer in South Dakota, with 56 water rights/permits in Bennett County alone (Water Rights, 2015b). There are a number of completion reports on file with the SD DENR-Water Rights Program for domestic wells that appear to be completed into the Ogallala aquifer; however, the annual withdrawal due to domestic use is not significant to the hydrologic budget of the aquifer (Water Rights, 2015c). The Pine Ridge and Rosebud Indian Reservations operate a number of irrigation wells completed into the Ogallala aquifer. When investigating 2010 aerial photography for the area, the majority of the irrigation is authorized by SD DENR-Water Rights Program and the Water Management Board (Buhler, 2012).

The irrigation development of the aquifer has remained relatively constant over the period of record, 1982 to 2013. Pumpage fluctuates, which is probably dependent on yearly seasonal climatic conditions. The average pumpage reported for the Ogallala in South Dakota over the period of record is 18,478 ac-ft/yr. Average irrigation pumpage from the Ogallala in Bennett County is 7,332 ac-ft/yr (Water Rights, 1983-2014). Irrigation questionnaires in 2013 do not reflect three additional irrigation permits that have been approved in Bennett County but were not yet operational at that time.

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 the following: water rights/permits limited by an annual volume will pump the entire volume appropriated, water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and future use permits can be fully developed. Therefore, withdrawal due to non-irrigation use water rights/permits and future use permits is expected to be less than 12,815 ac-ft/yr in South Dakota and 29 ac-ft/yr in Bennett County alone (Water Rights, 2015b).

Water Balance:

Currently, discharge from the Ogallala aquifer as a result of well withdrawals is estimated to be 31,293 ac-ft/yr for South Dakota, and 7,361 ac-ft/yr for Bennett County. These are both much lower than the lowest of the recharge estimates, indicating that at least 92,707 ac-ft/yr and 23,039 ac-ft/yr of unappropriated water is available in the Ogallala in South Dakota and Bennett County, respectively. Therefore, unappropriated water is available for the proposed uses.

Year	Number of Permits Reporting	Appropriation (ac-ft/yr)	Pumpage Reported (ac-ft/yr)
1982	35	17457.3	2032.77
1983	37	18134.3	4259.07
1984	44	22288.2	4816.4
1985	42	19778	8022
1986	41	19935	4359.6
1987	40	19663	5624
1988	39	18063	6366.5
1989	41	18730	10212.6
1990	43	19248	7169
1991	43	19248	6270.2
1992	43	19248	5629
1993	43	19248	4447.5
1994	44	20500	7448.54
1995	42	20218	5936.46
1996	44	20204	6430.94
1997	44	19677	7069
1998	44	19697	5805.38
1999	44	19697	5745.8
2000	44	19697	6812.18
2001	43	18950.9	7149.91
2002	42	18950.9	8321.28
2003	44	19604.9	7164.72
2004	44	19529.9	9067.61
2005	44	19925.9	8563.55
2006	43	19529.9	10838.95
2007	45	19245.9	10468.27
2008	45	19267.9	9976.89
2009	45	19267.9	8283.03
2010	45	19157.9	7347.36
2011	45	19489.9	6289.23
2012	42	18463.9	13134.53
2013	50	21665.9	13568.44
Min	35	17457.3	2032.77
Max	50	22288.2	13568.44
Avg	42.9	19493.2	7332.2

Table 1: Historic irrigation use for the Ogallala portion of the High Plains aquifer in Bennett County (Water Rights, 1983-2014)

Year	Number of Permits Reporting	Appropriation (ac-ft/yr)	Pumpage Reported (ac-ft/yr)
1982	93	62475.95	9217.41
1983	101	66508.65	10175.49
1984	109	68087.95	13273.4
1985	108	56382.05	18536.5
1986	105	59270.95	12952.6
1987	104	59472.95	12347.9
1988	103	57456.1	16154.4
1989	104	56839.4	27261.5
1990	107	57288.4	16511.6
1991	108	56438.8	16049.54
1992	107	54197.5	11985.8
1993	105	53357.5	11099.9
1994	108	54664.2	16699.41
1995	107	54719.2	14276.9
1996	110	55713.2	21222.84
1997	111	55610.2	18707
1998	109	54106.8	13777.34
1999	110	54366.8	13733.72
2000	111	54686.8	16141.74
2001	110	54653.6	18121.82
2002	105	52218.8	24176.59
2003	105	51408.8	22085.21
2004	107	51877.8	23939.9
2005	108	52537.8	20131.74
2006	111	52953.7	25733.32
2007	114	52681.7	24051.2
2008	116	53095.7	24498.85
2009	116	53095.7	22130.45
2010	115	52529.7	21261.58
2011	116	52856.7	15294.73
2012	118	53238.7	33224.01
2013	129	57392.7	26527.51
Max	129	68087.95	33224.01
Min	93	51408.8	9217.41
Average	109	55693.3	18478.18

Table 2: Historic irrigation use for the Ogallala portion of the High Plains aquifer in South Dakota (Water Rights, 1983-2014)

Observation Well Data:

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

The DENR-Water Rights Program monitors 78 observation wells completed into the Ogallala aquifer, with 18 of these in Bennett County (Water Rights, 2015a). Hydrographs for three of the nearest observation wells to the well sites proposed by these applications are shown in Figures 3-5. The locations of the three observation wells can be seen in Figure 1.

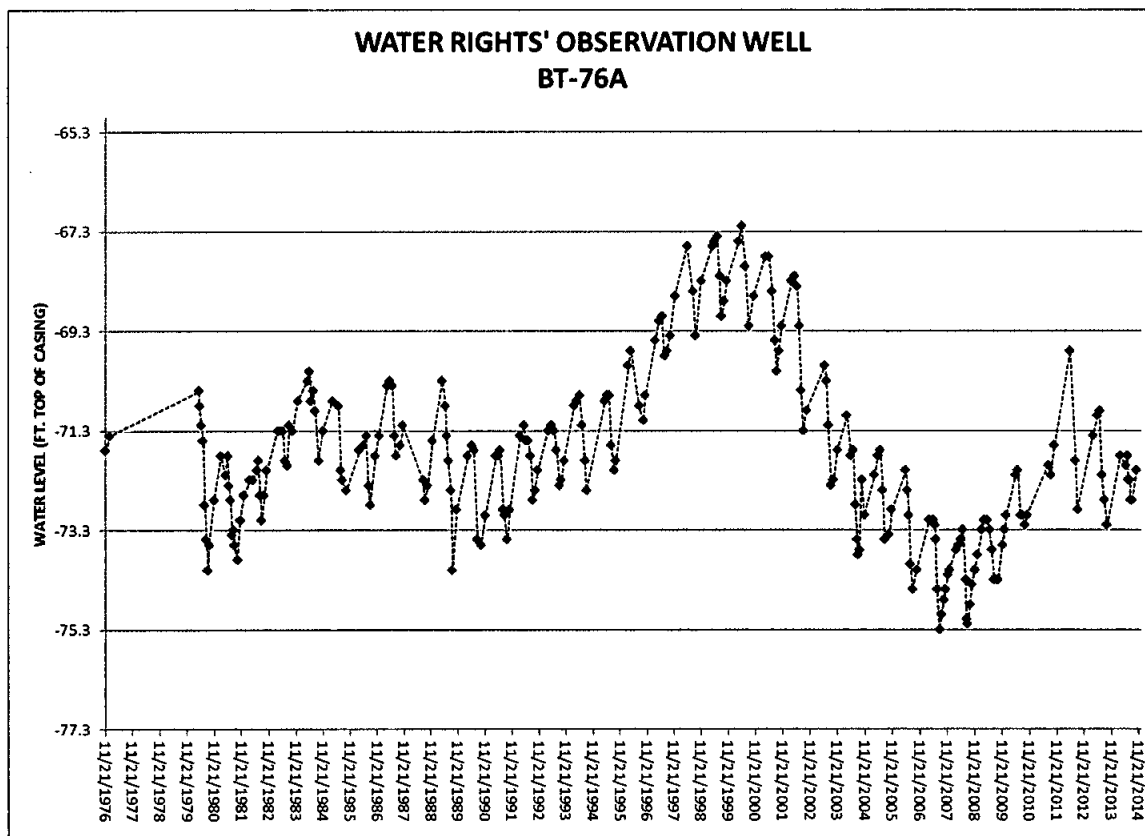


Figure 3: Hydrograph for DENR-Water Rights' observation well BT-76A (Water Rights, 2015a). See Figure 1 for exact location.

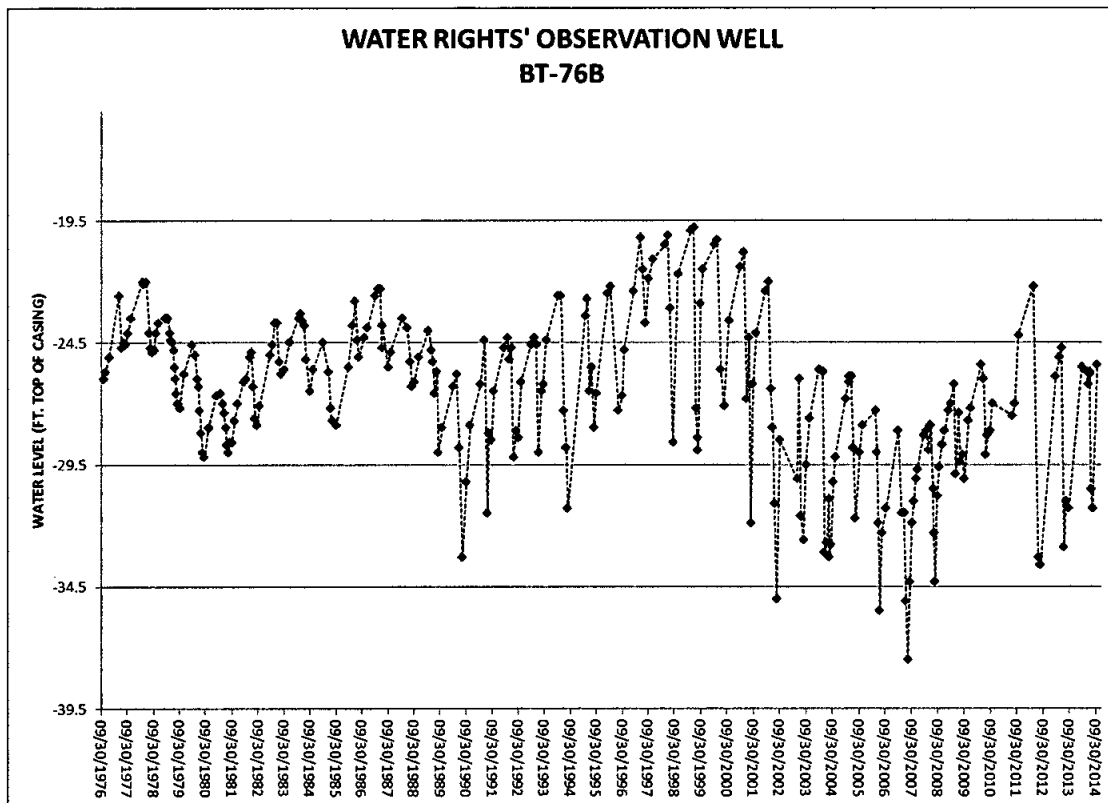


Figure 4: Hydrograph for DENR-Water Rights' observation well BT-76B (Water Rights, 2015a). See Figure 1 for exact location.

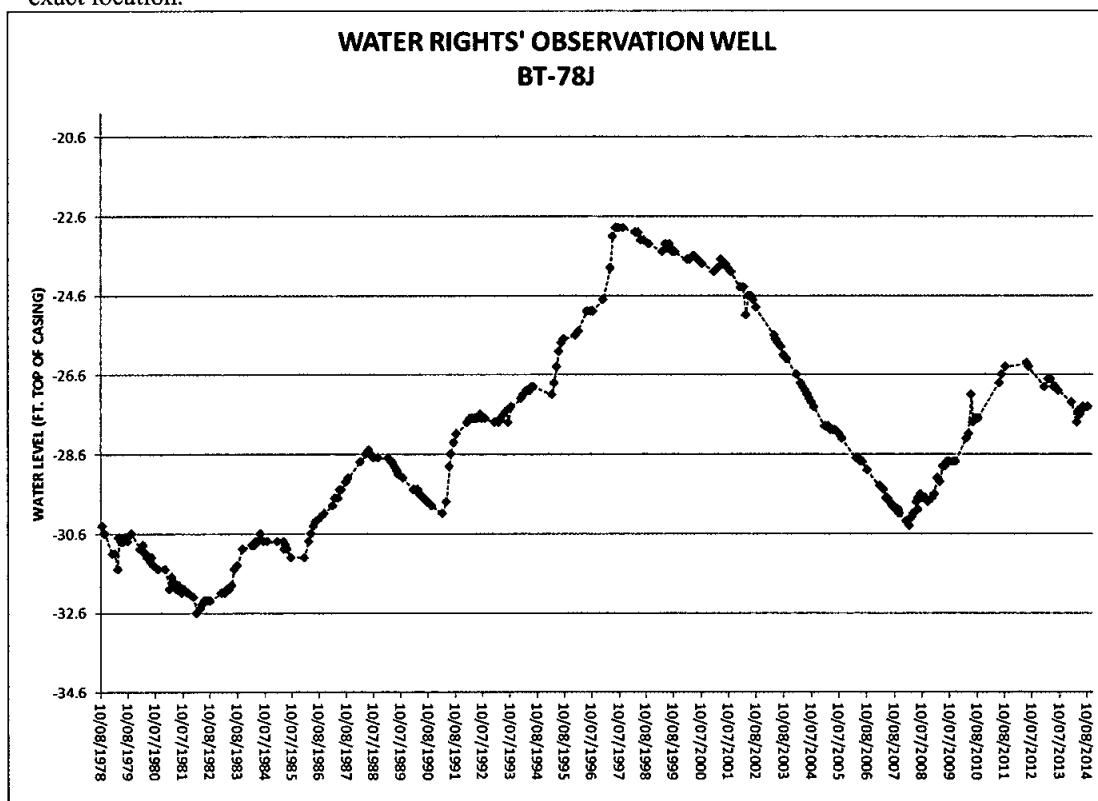


Figure 5: Hydrograph for DENR-Water Rights' observation well BT-78J (Water Rights, 2015a). See Figure 1 for exact location.

The observation well data documents cyclic conditions of water levels, rising during wet years and declining during dry years. Figures 3 and 4 show some effects of nearby pumping on the aquifer. However, temporal well withdrawal is masked by climatic conditions, indicating that recharge to and natural discharge from the Ogallala aquifer greatly exceeds well withdrawal. Therefore, unappropriated water is available from the Ogallala aquifer to support the proposed appropriations.

EXISTING WATER RIGHTS:

The DENR water rights database was reviewed for the nearest existing water rights/permits and domestic wells on file. Water rights/permits within a two mile radius of the proposed developments are listed below in Table 3. The closest of these wells (held under Water Permit No. 2718-2) is approximately 0.2 miles to the northwest of the northernmost well proposed in Application No. 2732-2, located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31, T38N-R34W. Given the thickness of the aquifer in this region (over 200 feet), the proposed diversions are not expected to significantly lower water levels within the aquifer. Water Permit Application Nos. 2732-2 and 2734-2 propose to construct wells approximately 0.4 miles from domestic wells on file with the Water Rights Program.

The greatest magnitude of drawdown seen in Figures 3-5 is visible in Figure 4, displaying historic water levels in Observation Well BT-76B. Water levels in BT-76B fluctuate nearly 10 feet between the irrigation season and the non-irrigation season. This is assumed primarily to be the result of the four water rights and one incorporated license within 0.5 miles of the observation well. These water rights and incorporated license (highlighted in yellow in Table 3) have a combined diversion rate of 9.79 cfs. The proposed diversion rates of wells within 0.5 miles of domestic wells on file with the Water Rights Program do not exceed 2.22 cfs. Consequently, drawdown as a result of pumping from these wells is not expected to reach the magnitude seen in Observation Well BT-76B. Given adequate construction of the wells in the vicinity, the resultant drawdown is not expected to be sufficient to cause impairment in existing wells.

Permit No	Last Name	First name	PRIORDATE	Status	Diversion Rate (cfs)	Irrigated Acres
1141-2	DONOVAN	COLE BLU	03/20/1973	LC	2.22	264
1179-2	FANNING	PAUL	05/02/1974	LC	1.78	264
1206-2	DONOVAN	JERRY J	08/27/1974	IL	1.78	135
1207-2	DONOVAN	COLE BLU	08/27/1974	LC	1.78	132
1219-2	FANNING	PAUL	10/16/1974	LC	1.89	132
1646-2	DONOVAN	COLE BLU	08/24/1978	LC	1.78	132
1672-2	DONOVAN	COLE BLU	05/16/1979	LC	2.67	210
1680-2A	JOHNSON	JEFF	07/26/1979	LC	2.00	138
1680-2B	DONOVAN	COLE BLU	07/26/1979	LC	1.80	128
1951-2	FANNING	PAUL	07/29/1985	LC	1.83	128
2102-2	LIVERMONT BROTHERS INC		09/29/1989	LC	1.77	124
2111-2	DONOVAN	COLE BLU	01/11/1990	LC	1.78	132
977-2	JOHNSON	JEFF	09/13/1968	LC	1.88	132
985-2	DONOVAN	COLE BLU	03/05/1969	LC	1.78	135
2502-2	FANNING	PAUL OR MARY ANN	03/24/2003	LC	1.91	134
2659-2	FANNING	PAUL	12/17/2010	LC	1.89	132
2697-2	DONOVAN REAL ESTATE TRUST	ROBERTA L	10/24/2012	PE	4.44	320
2698-2	FANNING	NEIL & LUPITA	10/24/2012	PE	2.22	160
2706-2	RISSE	NICK	03/01/2013	PE	4.44	320
2707-2	FANNING	DANIEL & PAULETTE	03/14/2013	PE	2.22	160
2718-2	FANNING	DANIEL & PAULETTE	10/07/2013	PE	2.22	160
2721-2	FANNING	NEIL & LUPITA	11/18/2013	PE	4.44	320

Table 3: Water permits/rights within two miles of the well sites proposed by the applicant. Water rights within 0.5 miles of Observation Well BT-76B have been highlighted in yellow (Water Rights, 2015b).

SDCL 46-5-6

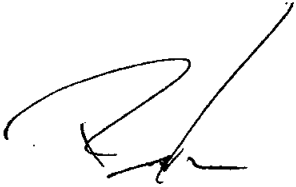
Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cfs for every 70 acres, or “the equivalent thereof.” The statute provides that the Water Management Board may allow a greater diversion if the method of irrigation so requires.

Water Permit Application Nos. 2732-2 and 2733-2 each propose to divert 1.78 cfs in order to irrigate two 100 acre plots. Application No. 2735-2 proposes to divert 3.78 cfs in order to irrigate 260 acres. The reason for the amount of water in excess of one cfs per 70 acres is the pivots associated with these applications will not complete full rotations but will still require the aforementioned diversion rates to operate correctly.

CONCLUSIONS

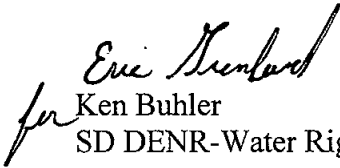
1. Water Permit Application No. 2732-2 proposes to divert water at a maximum diversion rate of 1.78 cfs to irrigate 100 acres.
2. Water Permit Application No. 2733-2 proposes to divert water at a maximum diversion rate of 1.78 cfs to irrigate 100 acres.
3. Water Permit Application No. 2734-2 proposes to divert water at a maximum diversion rate of 2.22 cfs to irrigate 160 acres.
4. Water Permit Application No. 2735-2 proposes to divert water at a maximum diversion rate of 3.78 cfs to irrigate 260 acres.

5. There is a reasonable probability that unappropriated water is available from the Ogallala aquifer.
6. In three of the four applications, the applicant has requested a diversion rate in excess of one cfs per 70 acres to properly supply the irrigation pivots.
7. There is a reasonable probability that these appropriations can be made without adversely impacting existing water rights or nearby wells.



Bracken Capen
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Allen, J.C., Iles, D.L., and Peters, A.K. 1985. Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota, Task 3A.B.C. and 4A.B.:Groundwater Resource Inventory: Final Report. U.S. Army Corp of Engineers Contract DAWC 45-82-C-015. SD DENR-Geological Survey. Vermillion, South Dakota.
- Buhler, K. 2012. Report on Water Permit Application No. 2559A-2 for John Markus: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Filipovic, D. 2011. Hydrologic Assessment of the High Plains Aquifer in Bennett County, South Dakota. Open-File Report 92-UR. SD DENR-Geological Survey Program, Vermillion, South Dakota.
- Gutentag, E.D., Hiemes, F.J., Krothe, N.C., Luckey, R.R., Weeks, J.B. 1984. Geohydrology of the High Plains Aquifer in Parts of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming: U.S. Geological Survey Professional Paper 1400-B, 63 p.
- Hedges, L.S., and Burch, S.L. 1985. Analysis of Ground-Water and Streamflow Data Western Dakota Region of South Dakota, Task 3.D and 4.C: Ground-Water Recharge: SD DENR-Geological Survey, Vermillion, South Dakota.
- In the Matter of Water Permit Application No. 7209-3, Longview Farms, LLP v. South Dakota DENR, South Dakota First Judicial Court Civ. No. 11-146 (Memorandum Decision, May 17, 2012)
- In the Matter of Water Permit Application No. 7239-3, Hanson County Dairy v. Robert Bender and Stace Nelson, South Dakota First Judicial Court Civ. No. 11-54 (Memorandum Decision, April 11, 2012)
- In the Matter of Water Permit Application No. 6431-3, Phillip W. Hines v. South Dakota DENR, South Dakota Sixth Judicial Court Civ. No. HU04-37 (Memorandum Decision, April 11, 2012)
- Kolm, K.E. and H.L. Case III. 1983. A Two-Dimensional, Finite-Difference Model of the High Plains Aquifer in Southern South Dakota. Water-Resources Investigations Report 83-4175. U.S. Geological Survey. Lakewood, Colorado.
- Rahn, P.H., and Paul, H.A., 1975, Hydrogeology of a portion of the Sand Hills and Ogallala aquifer, South Dakota and Nebraska: Ground Water, v. 13, no. 5, p. 428-437.
- Water Rights. 1982-2013. "1980-2012 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Building, Pierre, South Dakota.
- Water Rights. 2015a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2015b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2015c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Fanning

RECEIVED

MAR 02 2015

WATER RIGHTS
PROGRAM

Affidavit of Publication

State of South Dakota

County of Bennett

Karis Pappenfuss, being, first duly sworn, on oath, says: That he/she is an employee of Huether Publishing, Inc., and that the **Bennett County Booster** is, and during all the times hereinafter mentioned was, a weekly legal newspaper as defined in the SDCL 17-2-2.1 through the 17-2-2.4 inclusive; that said newspaper has been published within the said county of Bennett and State of South Dakota, for at least one year prior to the first publication of the attached public notice, and that the printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for 1 successive week(s) to wit:

February 25, 2015

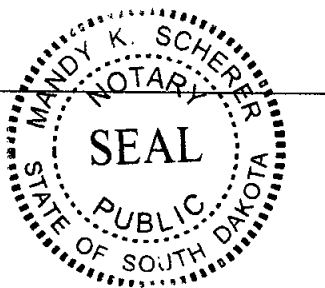
That the full amount of the fee charged for the publication of the attached public notice, \$40.80 insures to the sole benefit of the publisher or publishers; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

Signed: Karis Pappenfuss

Subscribed and sworn to before me this 25th day of February, 2015.

Mandy Scherer
Notary Public

My Commission Expires
December 9, 2015



RECEIVED

MAR 05 2015

Form 8

WATER RIGHTS
PROGRAM

capjournal.com 87

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Hughes) SS

I, Marylinn Baker

certify that the attached printed Notice was
taken

from the Capital Journal

printed and published in Pierre

County of Hughes and

state of South Dakota. The notice was
published

in the newspaper on the following date:

2-25-15

Cost of Printing \$44.08

Marylinn Baker
(Signature)

Bookkeeper
(Title)

3-3-15

(Date Signed)

Public Notice

Limit of 1 cfs per 70 acres.
Pursuant to SDCL 48-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2732-2, 2733-2, 2734-2 and 2735-2 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 48-2A-23, the Chief Engineer will act on these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition. Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Post Building, 323 E Capitol, Pierre SD 57501 (505 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by March 8, 2015.

SNAPLP 14100
July 2/25
NOTICE OF APPLICATIONS to Appropriate Water
Notice is given that Daniel and Paulette Fanning, 2885 237th Ave, Martin SD 57551, have filed the following applications for a water permit:
Application No. 2732-2 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Ogallala Aquifer (280 feet deep) located in the SW 1/4 SE 1/4 Section 31 for irrigation of 100 acres located in the W 1/2 SE 1/4, NE 1/4 SE 1/4 Section 31; all in T38N-R34W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.
Application No. 2733-2 proposes to appropriate 1.78 cfs from one well to be completed into the Ogallala Aquifer (340 feet deep) located in the approximate center of the NE 1/4 Section 2 for irrigation of 100 acres located in the NE 1/4 Section 2; all in T37N-R35W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.
Application No. 2734-2 proposes to appropriate 2.22 cfs from two wells to be completed into the Ogallala Aquifer (220 and 180 feet deep) located in the N 1/2 NW 1/4 Section 8 for irrigation of 160 acres located in the NW 1/4 Section 8; all in T37N-R34W.

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, 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 these applications. Steven M. Pimer, Secretary, Department of Environment and Natural Resources.

Published once at the total approximate cost of \$44.08.

Application No. 2735-2 proposes to appropriate 3.79 cfs from two wells to be completed into the Ogallala Aquifer (480 and 450 feet deep) located in the NE 1/4 SW 1/4 and the SW 1/4 NE 1/4 Section 6; all in T37N-R34W. The applicant is requesting a diversion rate greater than the statutory



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

February 18, 2015

Bennett County Booster II
PO Box 610
Martin SD 57551

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 2732-2, 2733-2, 2734-2 and 2735-2 to Appropriate Water. Please publish the notice once on February 25, 2015. 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 Daniel and Paulette Fanning, 28885 237th Ave, Martin SD 57551 (Ph # 605-685-5274).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

February 18, 2015

Capital Journal
PO Box 878
Pierre SD 57501

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 2732-2, 2733-2, 2734-2 and 2735-2 to Appropriate Water. Please publish the notice once on February 25, 2015. 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 Daniel and Paulette Fanning, 28885 237th Ave, Martin SD 57551 (Ph # 605-685-5274).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

February 18, 2015

Daniel and Paulette Fanning
28885 237th Ave
Martin SD 57551

Dear Sir:

Water Permit Application Nos. 2732-2, 2733-2, 2734-2 and 2735-2 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Bennett County Booster II printed at Martin SD (Ph # 605-685-6866) and the Capital Journal printed at Pierre SD (Ph # 605-224-7301). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications 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(s) has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the applications.

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 applications.

Instruction to Newspaper - Publish the Notice on February 25, 2015. 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 APPLICATIONS to Appropriate Water

Notice is given that Daniel and Paulette Fanning, 28885 237th Ave, Martin SD 57551 have filed the following applications for a water permit.

Application No. 2732-2 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Ogallala Aquifer (280 feet deep) located in the SW 1/4 SE 1/4 Section 31 for irrigation of 100 acres located in the W 1/2 SE 1/4, NE 1/4 SE 1/4 Section 31; all in T38N-R34W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

Application No. 2733-2 proposes to appropriate 1.78 cfs from one well to be completed into the Ogallala Aquifer (340 feet deep) located in the approximate center of the NE 1/4 Section 2 for irrigation of 100 acres located in the NE 1/4 Section 2; all in T37N-R35W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

Application No. 2734-2 proposes to appropriate 2.22 cfs from two wells to be completed into the Ogallala Aquifer (220 and 180 feet deep) located in the N 1/2 NW 1/4 Section 8 for irrigation of 160 acres located in the NW 1/4 Section 8; all in T37N-R34W.

Application No. 2735-2 proposes to appropriate 3.79 cfs from two wells to be completed into the Ogallala Aquifer (460 and 450 feet deep) located in the NE 1/4 SW 1/4 and the SW 1/4 NE 1/4 Section 6 for irrigation of 260 acres located in the SW 1/4, S 1/2 NW 1/4, SW 1/4 NE 1/4 Section 6; all in T37N-R34W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2732-2, 2733-2, 2734-2 and 2735-2 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 these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. 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 March 9, 2015.

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, 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 these applications. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Published once at the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

APR 06 2015

Daniel & Paulette Fanning
28885 237th Ave
Martin SD 57551

Dear Sir:

Enclosed are Water Permit Nos. 2732-2, 2733-2, 2734-2 & 2735-2 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Form 10's, *Notice of Completion of Works and Application of Water to Beneficial Use*, are enclosed. Please return the completed forms after you have finished the systems and have put the water to beneficial use. An investigation can then be scheduled so the water licenses 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

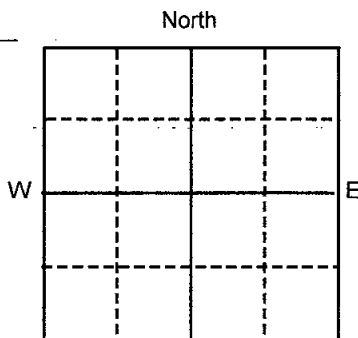
enclosures

2735-2

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE ¼ SE ¼ Sec 6 Twp 37 Rg 34County BENNETTPlease mark well
location with an "X"

Well Completion Date

April 1, 2015

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:

REVERSE ROTARY

CASING DATA:

☐ Steel ☒ Plastic ☐ Other
 If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
20.0 LB/FT	16.00 IN	1.0 FT	100.0 FT	28.00 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
CEMENT	50	15.5 Lb/gal	20.0 Ft	0.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

PUMPED TREMIE PIPE

SCREEN:

☒ Perforated pipe ☐ Manufactured
 Diameter 16.00 Inches Length 360.0 Feet
Material PVCSlot Size .080 Set From 100.0 Feet to 460.0 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? HTH
☐ No, Why Not?

 Lab to which water
 quality sample sent for analysis
Well Owner: BUTCH FANNING

Business Name:

Address: 28885 - 237 AVENUECity, State, Zip: MARTIN SD 57551

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
top soil, sand /fine-med, sand w/ clay	0	36
sand/ med-coarse, sand w/ clay	36	92
sand/ fine-med, sand w/ clay	92	244
sandstone w/ clay, sand w/ clay	244	284
sandstone w/ clay, sand w/ clay	284	330
sandstone w/clay,clay,sand/ fine-med	330	412
sand w/ clay, sand / fine - med	412	452
red rock	452	460

STATIC WATER LEVEL 68.0 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

96.0 Ft. After 2.0 Hrs. pumped 1,400.0 GPM93.0 Ft. After 2.0 Hrs. pumped 1,250.0 GPMIf pump installed, pump rate: 900.0 GPM

REMARKS

RECEIVED

APR 29 2015

WATER RIGHTS
PROGRAMThis well was drilled under license # 189 and this report is true and accurate.Drilling firm: GROSCH IRRIGATION CO., INC.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: _____

5-6-15

NOTICE OF COMPLETION OF WORKS AND APPLICATION OF WATER TO BENEFICIAL USE

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

Date

7/24/18

FROM:

Dan Fanning
(name)28885 257th Ave
(address)Martin
(city)S.D.
(state)57551
(zip)605-685-5274
(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. 2735-2
2760-2 states that the water use system is to be constructed by
3/9/2020, and water is to be put to beneficial use by 3/9/2024
(date) (date)

The water use system was completed on 3/2015
(date)

Applying the water to beneficial use was completed on 3/2016
2760-2 (date)

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

Dan Fanning

x Daniel Fanning

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCESJOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

SEP 11 2018

2735-2

2760-2

Daniel T & Paulette Fanning
28885 237th Ave
Martin SD 57551

Dear Mr. & Mrs. Fanning:

Enclosed is Water License No. 2760-2. 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.

With reference to the chemigation equipment in place, the staff engineer noted part of the equipment did not meet standards. Specifically, a 20' hose needs to be added to the low pressure drain to direct any water getting past the check valve away from the well. Enclosed is a copy of Water Management Board rules dealing with chemigation. "Appendix A" shows the minimum requirements for the equipment. If after reading through the rules you have questions concerning placement of the equipment, please contact Ron Duvall with our program (his card is attached).

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

Sincerely,

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

enclosures

Note: The applicable portions of Water Permit No. 2735-2 have been incorporated into Water License No. 2760-2.