

WATER PERMIT NO. 8262-3

Name of Applicant: Corey and Jennifer Tellinghuisen

Address: 19152 SD Hwy 25, Bryant SD 57221 Phone: 605 881-9646

Amount of Water Claimed: 2.40 cfs Total Acres: 168.35

Source of Water Supply: groundwater (2 wells)

Water to be used for: irrigation County: Clark

Type of Waste Disposal System:

Location: 1 1/2 miles west of Willow Lake

PRIORITY Date Received: 1-9-17

Application/License Fee: \$ 1050.00

Corrected Application Received: 1-17-17

Period of Annual Use: May 1 – Sept 30

Remarks:

Diversion Point: SW 1/4 NE 1/4 and SE 1/4 NW
1/4 Sec 33-T114N-R57W

Land to be Irrigated: E 1/2 Sec 33-T114N-R57W

Depth of Well: 70 – 90 feet deep

Well Driller:

Remarks:

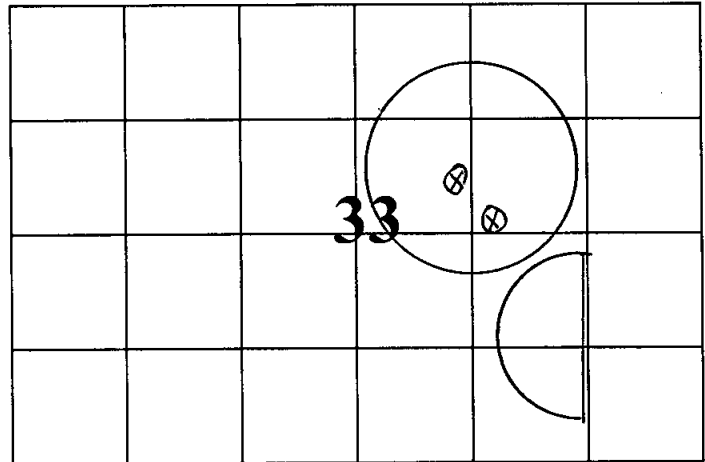
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 1-17-17

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8262-3</u> (office use only)	Hydrologic Unit <u>10170201</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>Clark Co. Courier, Clark</u>	<u>605-532-3654</u>
	<u>Public Opinion, Watertown</u>	<u>605-886-6901</u>

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JAN - 9 2017

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____
(Use predates Mar 2, 1955)

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

N/A

1. Name to Appear on Irrigation Permit Corey and Jennifer Tellinghuisen
Note: The "Name to Appear on Irrigation Permit" must be the name in which the property to be irrigated is held in.
- Mailing Address 19152 SD Hwy 25 Bryant SD 57221
(Address) (City) (State) (Zip Code)
- Phone 6056252484 Mobile 6058819646 Email _____
2. Amount of water claimed 2.41 *CFS or 1080 **GPM ***AF Total Acreage 168.35
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply Well
4. Location of point of diversion 2 Wells in the east 1/2 section 33-114-57
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
(SW1/4 NE1/4 and SE1/4 NE1/4) County Clark
5. County or counties where water will be used Clark
6. Annual period during which water is to be used May 1 - Sept 30
7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
NW1/4 NE1/4 - 33-114-57	14.5	NW1/4 SE1/4 - 33-114-57	14.5
NE1/4 NE1/4 33-114-57	14.5	NE1/4 SE1/4 33-114-57	32.0
SW1/4 NE1/4 33-114-57	39.5	SE1/4 SE1/4 33-114-57	13.85
SE1/4 NE1/4 33-114-57	39.5	SW1/4 SE1/4 33-114-57	0

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

Installation of 1 full circle center pivot system and 1 partial circle system. See attached plan.

I, Corey Tellinghuisen Owner, the applicant, certify under
Name of Person Title (if applicable)

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

SOUTH DAKOTA
WATER PERMIT NO. 8262-3

Date of first receipt of application January 9, 2017.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8262-3 to Corey and Jennifer Tellinghuisen, 19152 SD Hwy 25, Bryant SD 57221 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. 8262-3 appropriates 2.41 cubic feet of water per second from two wells to be completed into the Willow Lake management unit of the Vermillion East Fork Aquifer (70-90 feet deep) located in the S 1/2 NE 1/4 Section 33 for irrigation of 168.35 acres located in the NE 1/4, N 1/2 SE 1/4, SE 1/4 SE 1/4 Section 33; all in T114N-R57W.
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 January 9, 2017.
4. The date of approval of Permit No. 8262-3 is April 3, 2017.
5. One-fifth of the construction is to be completed on or before October 3, 2019.
6. All construction is to be completed on or before April 3, 2022.
7. Water is to be put to beneficial use on or before April 3, 2026.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The 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. 8262-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

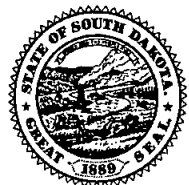
WATER MANAGEMENT BOARD

By: Jeanne Goodman

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

APR 10 2017

date



Supplemental Information

(type or print)

1. Well Information

(check one or both as applicable) ☒ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 1-2 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

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

For either Existing or Proposed Wells:

c) Well Depth (required) 70-90 Depth to Top of Water Bearing Material ? Depth to Water from Surface 15-25

d) Distance to nearest domestic well on applicant's property N/A Property owned by others 1/2 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)

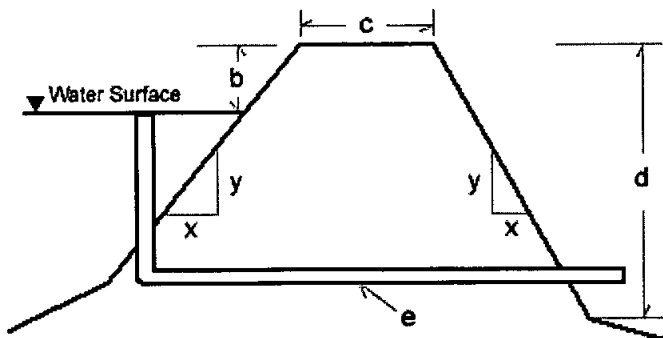
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





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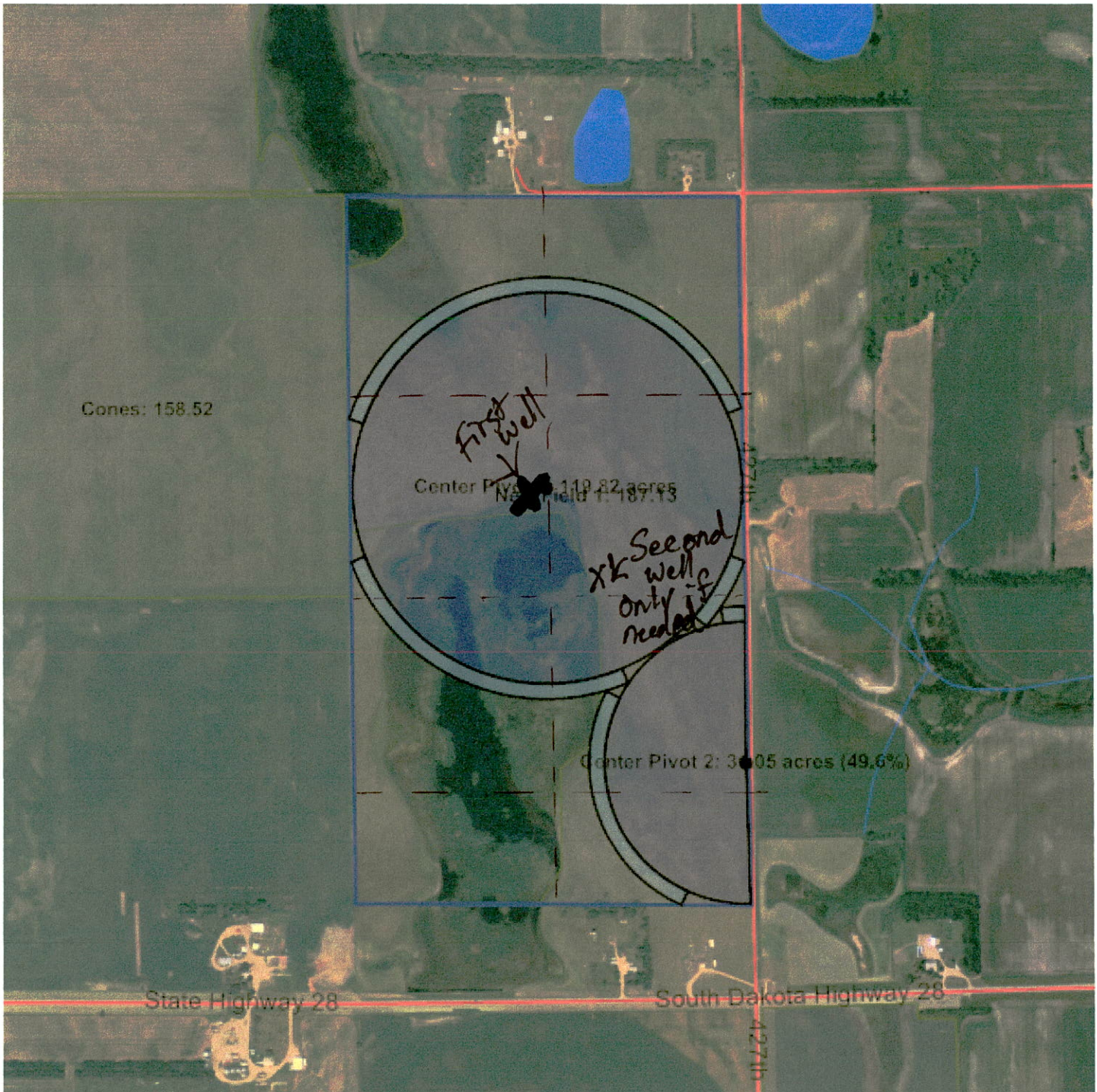
JAN 17 2017

WATER RIGHTS
PROGRAM

Schmidtco
AG SERVICES

42699 SD Hwy 28
Willow Lake, SD 57278
605-625-3456

Grower: Cory Tellinghuisen



$E \frac{1}{2} - 33 - 114 - 57$
168.35 Acres.

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WATER RIGHTS
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Sec 20
T114N
R57W

Sec 21
T114N
R57W

Sec 22
T114N
R57W

Sec 29
T114N
R57W

Sec 28
T114N
R57W

Sec 27
T114N
R57W

Sec 32
T114N
R57W

Sec 33
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Sec 34
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R57W

Sec 5
T113N
R57W

Sec 4
T113N
R57W

Sec 3
T113N
R57W

Sec 9

Sec 10

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 1/10, 20 17

RECEIVED OF Corey Tellinghuisen 19152 SD Hwy 25 Bryant SD 57221

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

Fee for Application for Permit No. <u>8262-3</u> to Appropriate Water, to construct and to put water to beneficial use	850	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8262-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	1050 00

No. **08079**

By *James Goodman*
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

January 10, 2017

Corey and Jennifer Tellinghuisen
19152 SD Hwy 25
Bryant SD 57221

Dear Mr. & Mrs. Tellinghuisen:

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

- Enclosed is the aerial photo map submitted with the application. Please mark the two proposed well locations with an "X". I realize that test holes have not been drilled so definite locations have not been determined, but it is required that the proposed locations be identified on the map.

If you have any questions, please contact me.

Sincerely,

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

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

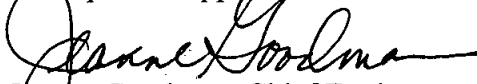
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8262-3, Corey and Jennifer Tellinghuisen**

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. 8262-3, Corey and Jennifer Tellinghuisen, 19152 SD Hwy 25, Bryant SD 57221.

The Chief Engineer is recommending APPROVAL of Application No. 8262-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 8262-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.


Jeanne Goodman, Chief Engineer
March 14, 2017

Report to the Chief Engineer

Water Permit Application No. 8262-3

Corey and Jennifer Tellinghuisen

February 21, 2017

Water Permit Application No. 8262-3 proposes to appropriate water from the Willow Lake Management unit of the Vermillion East Fork aquifer at a maximum diversion rate of 2.41 cubic feet per second (cfs). The proposed water use is for the irrigation of 168.35 acres located in the NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 33; T114N-R57W in Clark County. The application proposes to use two wells about 70-90 feet deep as diversion points to be located in S $\frac{1}{2}$ NE $\frac{1}{4}$ Section 33; T114N-R57W in Clark County.

Aquifer: Willow Lake management unit of the Vermillion East Fork (VEF: WL)

Hydrogeology and Aquifer Characteristics

Hedges et al. (1982) delineated various management units within aquifers based on hydrogeologic conditions within the aquifer, such as groundwater flow divides, permeability changes of aquifer material, groundwater discharge points, etc. This application proposes to appropriate water from the Willow Lake management unit of the Vermillion East Fork aquifer (Vermillion East Fork: Willow Lake aquifer), shown in Figure 1. The Vermillion East Fork aquifer in Clark County was referred to as Prairie Coteau aquifer 1 in Hamilton (1986). The aquifer consists of gravel and fine to coarse sand deposited by glacial meltwaters in a valley cut into stationary ice and till (Christensen, 1987 and Hamilton, 1986).

The Vermillion East Fork: Willow Lake aquifer underlies about 13,100 acres of Clark County (Hedges et al., 1982). Hedges et al. (1982) estimates that the Vermillion East Fork: Willow Lake aquifer contains an estimated 29,480 acre-feet of water in storage. This management unit is primarily under unconfined conditions (Hamilton, 1986 and Water Rights, 2017a).

The applicant did not submit testhole information with this application; however sufficient geologic information is available in the area and proposed well depth of this application to identify the aquifer (SD Geologic Survey, 2017 and Water Rights, 2017c). The geographic location and proposed well depth correspond to the Vermillion East Fork: Willow Lake aquifer. The well completion report for Water Permit No. 7406-3 located about 0.5 miles to the west of the nearest proposed well site for this application reported aquifer materials from 5 to 65 feet below grade with a clay interval from 12 to 18 feet below grade and a static water level of 16 feet below grade (2/7/2013) (Water Rights, 2017c). The well completion report for Water Permit No. 7346-3 located about 0.4 miles to the southwest of the nearest proposed well site for this application, reported aquifer materials from 10 to 74 feet below grade with a static water level of 10 feet below grade (4/4/2012) (Water Rights, 2017c). Although glacial geology can be highly variable some similarity can be expected at the proposed well sites for this application.

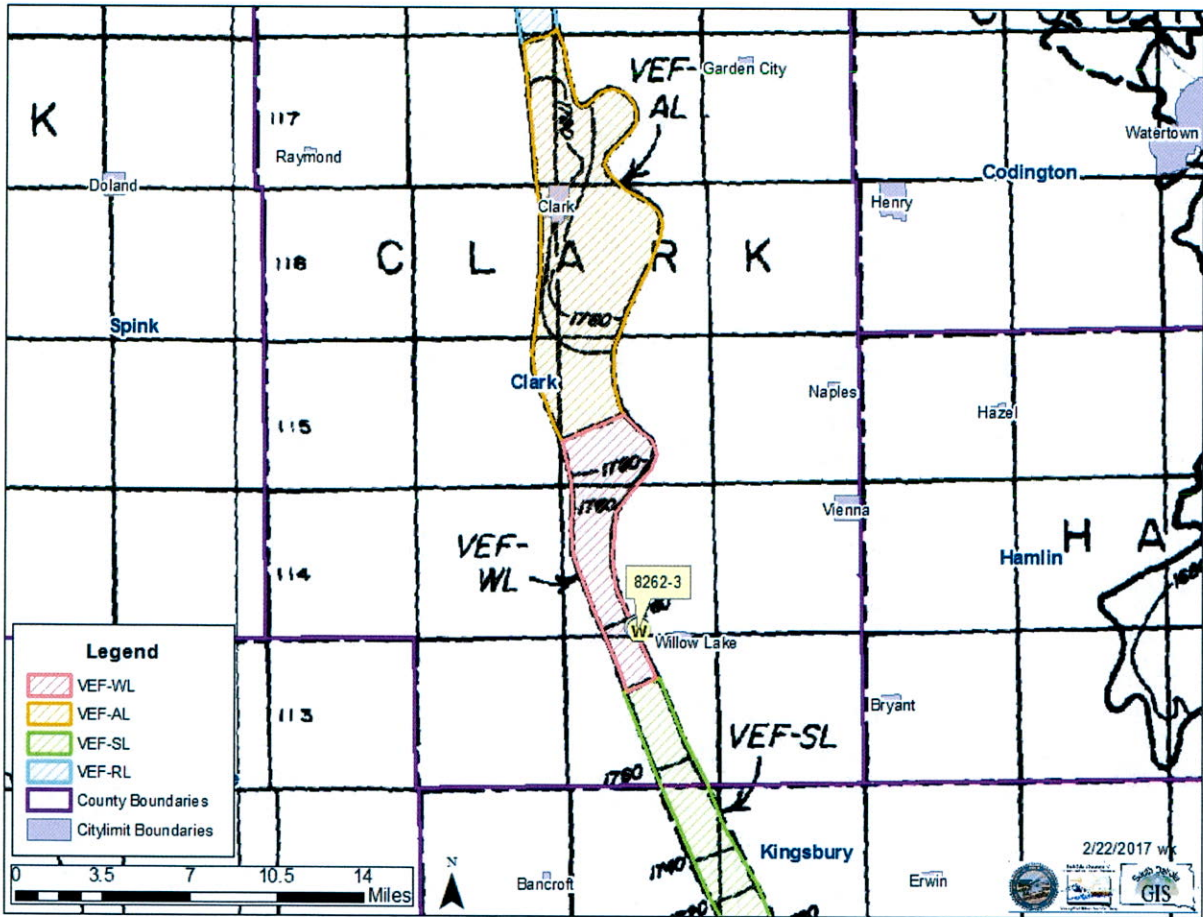


Figure 1: Map of the Willow Lake (WL) management unit of the Vermillion East Fork aquifer (VEF) also showing portions of the Antelope Lake (AL), Spirit Lake (SL), and Reid Lake (RL) management units (modified from Hedges et al., 1982)

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

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for 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

Water Permit Application No. 8262-3 proposes to appropriate water from the Vermillion East Fork: Willow Lake aquifer for the purpose of irrigation. The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1 which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually

from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source.” If the source of the water is older or lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a water distribution system is not involved and Vermillion East Fork: Willow Lake aquifer is not older or lower than the Greenhorn Formation, therefore the withdrawal/recharge issue must be considered.

Hydraulic Budget

Recharge

Recharge sources to the aquifer include infiltration of precipitation, seepage of surface water, and inflow from the till (Hamilton, 1986). Hedges et al. (1985) estimated recharge to this the Willow Lake management unit of the Vermillion East Fork aquifer utilizing observation well analysis at approximately 5.6 inches per year. By applying this rate to the area of the management unit results in an estimated average annual recharge of 6,133 acre-feet per year. However, it should be noted that the observation well analysis used to estimate recharge developed by Hedges et al. (1985) essentially assumes that a rise in the water level of an aquifer is the product of recharge only, when in actuality, a water level rise is the result of recharge to the aquifer exceeding discharge to the aquifer. Therefore, recharge estimate based on the observation well analysis of Hedges et al. (1985) could be considered conservative.

Withdrawals

Withdrawals from the aquifer include evapotranspiration, seepage to surface water, pumping, and outflow to the till (Hamilton, 1986). The amount of water withdrawn by domestic wells are not considered a significant portion of the hydraulic budget of the management unit; additionally with the development of rural water systems in the area many domestic wells may no longer be in use. Withdrawals from the aquifer that require permitting can be split into irrigation and non-irrigation uses. There are 17 water rights/permits appropriating water for this aquifer for irrigation use and one water right for non-irrigation use (City of Willow Lake).

Historically, average water use by non-irrigation appropriations limited by instantaneous diversion rate has been less than 60% of full time pumping at the permitted diversion rate. Water Right No. 1601-3 for the City of Willow Lake is limited to a maximum diversion rate of 0.35 cfs. At 60% of the maximum diversion rate for this permit, the estimated average annual water use is 152 acre feet per year.

The Water Rights Program collects and maintains irrigation water use information from across the state. Since 2010, seven water permits in this aquifer have been issued. Due to this the historic average water use in the management unit is not an appropriate method to estimate average annual withdrawal from the management unit. The 17 irrigation water rights/permits in this management unit authorize the irrigation of 2,588.8 acres. Using the 1994 to 2015 Irrigation Questionnaire data, the average application rate is 3.51 inches per authorized acre for the irrigation water rights/permits appropriating water from this management unit (Water Rights,

1995-2016). In comparison to other management units and aquifers in the Eastern part of the state this is a lower rate than other aquifers in which a similar analysis has been performed. This lower rate can be attributed to several factors. In considering these water right/permits, Water Right No. 2322-3 and No. 2970-3 (authorizing the irrigation of 502 acres) have been in CRP from 1999 to present (questionnaires on these water rights indicate they are enrolled in CRP until 2024). Additionally, in reviewing the aerial imagery fluctuations in the size of surface water drainage features (marshes, ponds, prairie potholes, sloughs, etc.) that are prevalent in this area of the Coteau Des Prairies region appear to be impacting the irrigability of some of the authorized acres within the management unit. This results in the irrigation of fewer acres than authorized, which results in a lower application rate per authorized acre. However, a generous estimate for irrigation withdrawals in this aquifer can be made utilizing a rate of ten inches per authorized acre. This yields an estimated average annual withdrawal of less than 2,160 acre-feet per year.

Balance

The estimated average annual recharge to the Vermillion East Fork: Willow Lake aquifer is 6,133 acre-feet per year. The average annual withdrawal from the aquifer is estimated at 2,312 acre-feet per year. Using a rate of ten inches per authorized acre this application, if approved, it is estimated to have an average annual withdrawal of less than 140 acre-feet per year. Therefore, there is a reasonable probability that water is available in the aquifer.

Observation Wells

In determining the availability of unappropriated water for a permit application Administrative Rule of South Dakota 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements, in addition to other data, to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated annual recharge.

The SD-DENR Water Rights Program monitors four observation wells completed into Vermillion East Fork: Willow Lake aquifer, the nearest of which is observation well CK-68A located about 0.8 miles to the south. The hydrograph for this observation well is shown in Figure 2. The hydrographs for the other observation wells monitoring this management unit are shown in Figures 3, 4, and 5. Observation well CK-78J appears to behave in a slightly different manner than the other observation wells in the management unit; it has yet to be determined if this behavior is reflective of localized conditions in the aquifer or the condition of the well.

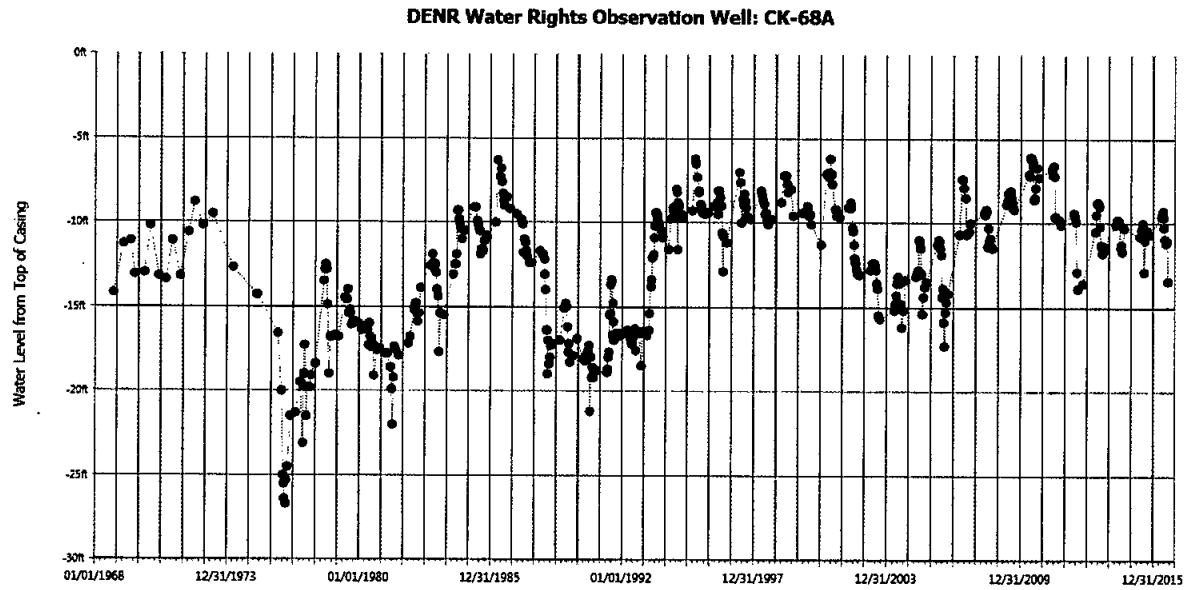


Figure 2: Hydrograph of observation well CK-68A located about 0.8 miles to the south (Water Rights, 2017a)

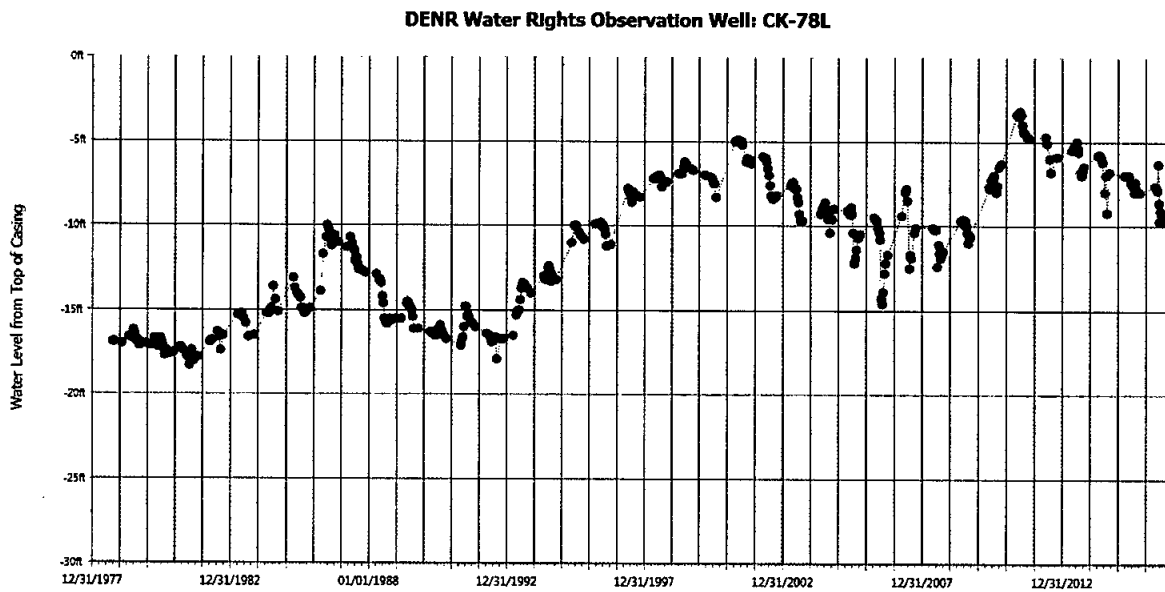


Figure 3: Hydrograph of observation well CK-78L located about 1.6 miles to the north northwest (Water Rights, 2017a)

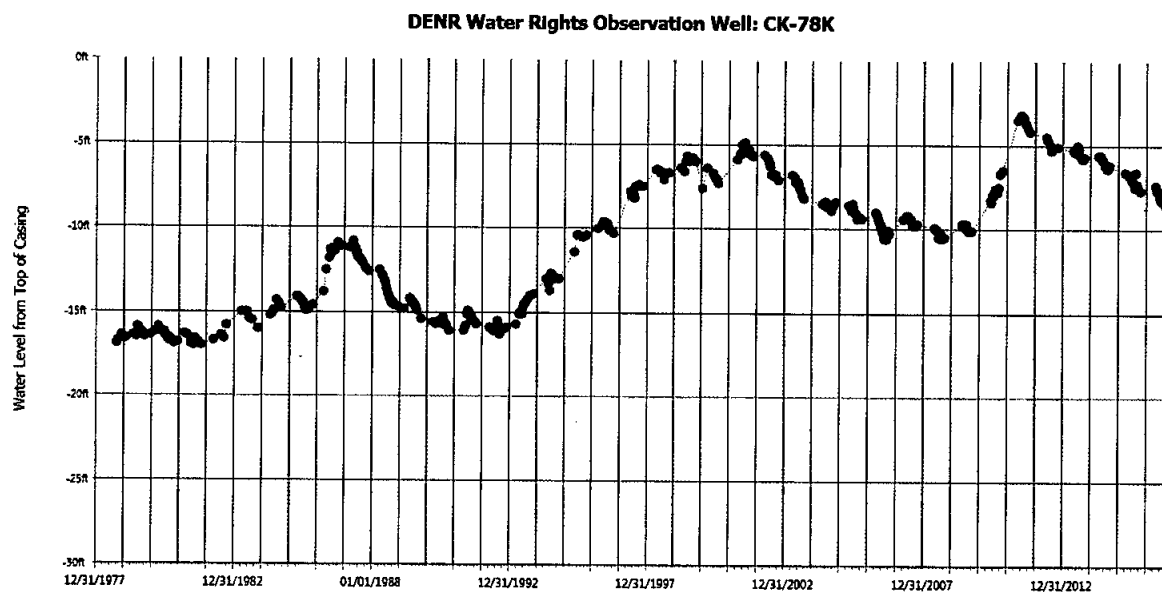


Figure 4: Hydrograph of observation well CK-78K located about 3.5 miles to the north (Water Rights, 2017a)

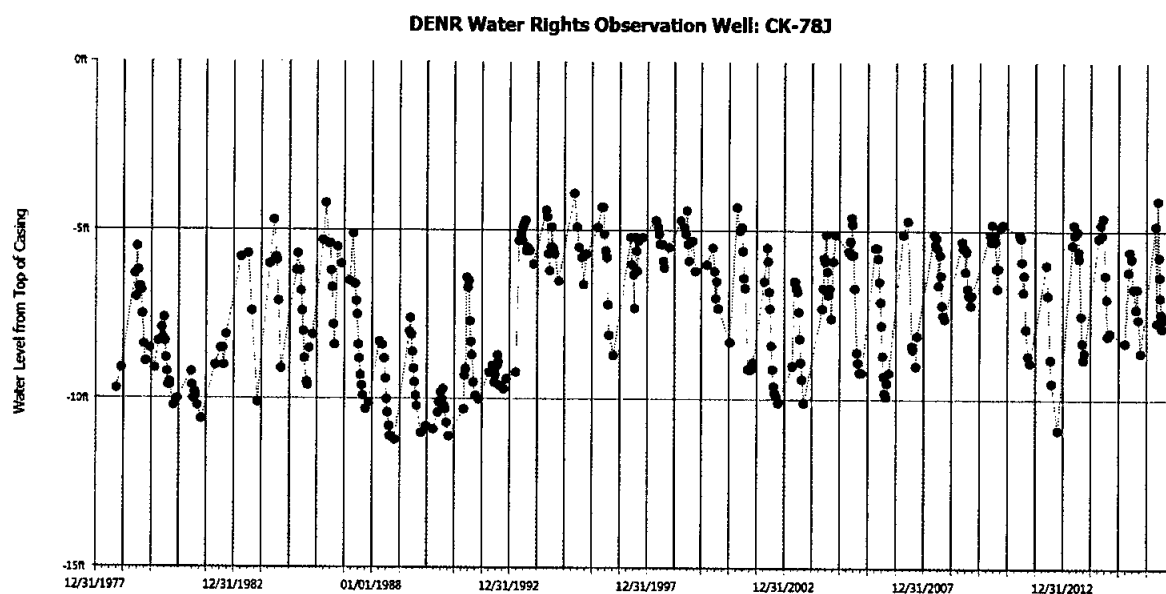


Figure 5: Hydrograph of observation well CK-78J located about 6.6 miles to the north northwest (Water Rights, 2017a)

An examination of the observation wells monitoring the adjacent Vermillion East Fork aquifer management units of Antelope Lake and Spirit Lake shows 12 out of 14 observation wells (including observation well CK-78M) document declining water levels of varying magnitude since 2011 (Water Rights, 2017a). This decline is primarily the result of water levels declining following historic or near historic water level highs. The observation wells are

therefore responding to climatic conditions in the aquifer. The difference in the magnitude of that impact of climatic conditions is likely a product of localized conditions within the aquifer.

Observation well water levels increase during wet periods and gradually decrease during dry periods. Observation wells in the Vermillion East Fork: Willow Lake aquifer generally demonstrate that the aquifer responds well to climatic conditions, with the response of the aquifer to climatic conditions masking the temporal effects of well withdrawals. This indicates that natural conditions dominate the aquifer, indicating that recharge to and natural discharge from the aquifer exceeds pumping. Since natural discharge from an aquifer can be captured for pumping, there is a reasonable probability that unappropriated water is available.

Existing Rights/Permits

The approximate diversion points of currently authorized water rights/permits in the vicinity of the proposed well location for this application are shown in Figure 6 and summarized in Table 1. Diversion points for Water Right No. 1601-3, Water Right No. 2212-2, Water Permit No. 7346-3, and Water Permit No. 7406-3 are located within about 0.5 miles of the proposed well location for this application. Communication with the City of Willow Lake has indicated that the city's two wells (one is a backup/emergency use well) are likely located on private land in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 33 T114N-R57W rather than the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 33 T114N-R57W (Johnson, 2017). Based on this information the wells for the City of Willow Lake are likely within 0.45 to 0.55 miles of the southernmost proposed well site. Additionally, communication with the City of Willow Lake indicated that they are currently pursuing hooking up to Clark Rural water in the future (Johnson, 2017). There are several domestic well completion reports on file with the Water Rights Program within one mile of the proposed well locations for this application.

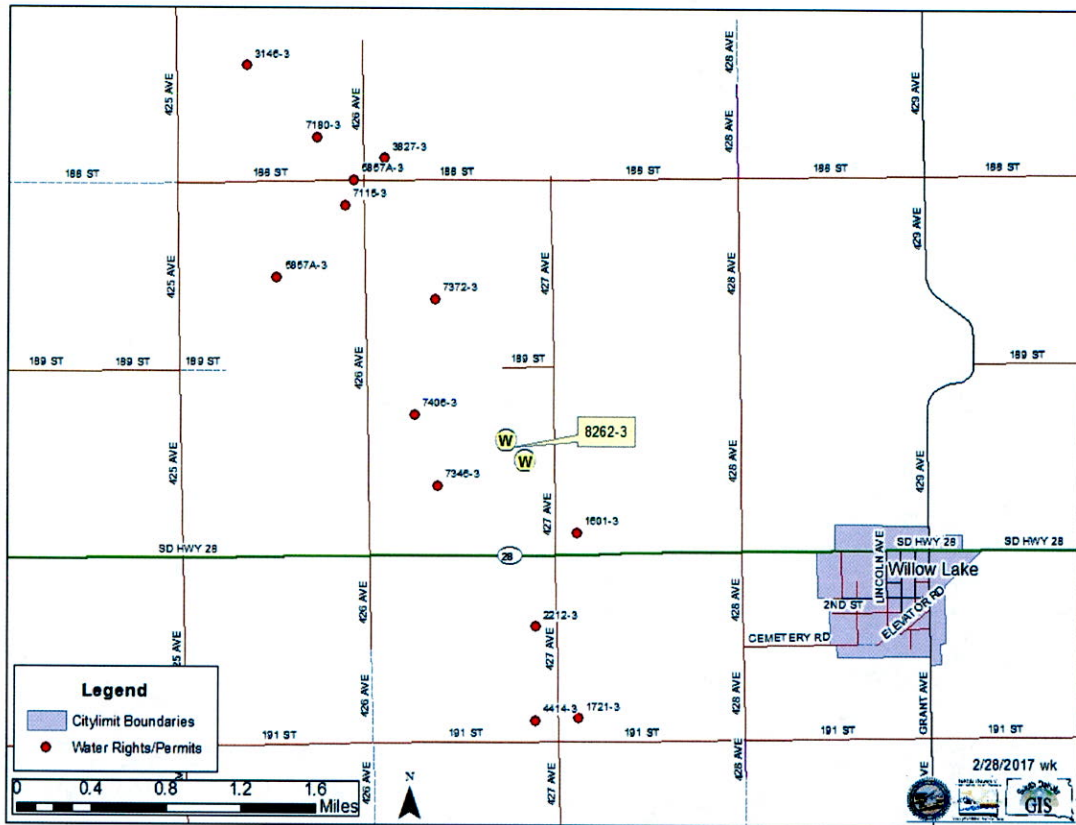


Figure 6: Approximate location of currently authorized diversion points for water rights/permits appropriating water from the Vermillion East Fork: Willow Lake aquifer (Water Rights, 2017b)

Table 1: Summary of Water Rights/Permits shown in Figure 6

Permit No.	Name	Status	Use	Rate (cfs)	Acres
1601-3	City of Willow Lake	LC	MUN	0.35	n/a
1721-3	Phyllis Schmidt	LC	IRR	1.71	120
2212-3	Phyllis Schmidt	LC	IRR	1.6	112
3146-3	Dwight Warkenthien	LC	IRR	1.78	132
3827-3	Marlin D. Warkenthien	LC	IRR	1.78	132
4414-3	Mary J. Schmidt	LC	IRR	2.44	284.8
5857A-3	Clinton Houghton	LC	IRR	1.31	92
7115-3	Lee Houghton	PE	IRR	0	20
7180-3	Bratland Seed Inc.	PE	IRR	1.56	160
7346-3	Jack Schmidt	PE	IRR	1.56	140
7372-3	Mark Kannegieter	PE	IRR	1.92	134
7406-3	Jack Schmidt	PE	IRR	1.89	140

Since the aquifer is under unconfined conditions, drawdown due to pumping is not expected to extend far from the proposed well sites for this application. The Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. The precise amount of drawdown cannot be quantified without

aquifer testing, however the general response of the aquifer to the development of water permits can be gauged by considering the effects of development in close proximity to the observation wells monitoring the aquifer. Observation well CK-68A is within one mile of four developed irrigation water rights/permits and one municipal water right, and the hydrograph (Figure 2) for this well shows little to no impacts from pumping. Additionally, observation well CK-78L is within a mile of six irrigation water rights/permits that have been developed, and the hydrograph (Figure 3) for this well shows little to no impacts from pumping. This indicates that any potential drawdown from the proposed wells for this application is not expected to be significant far from the well site. Observation well data has not demonstrated adverse impacts from multiple water right/permits within a mile, and the aquifer in the area of the proposed well locations for this application is expected to respond to pumping in a similar manner. Therefore, drawdown from the pumping of the proposed wells is not expected to adversely impact existing water rights/permits or adequate domestic wells. An adequate well as defined by South Dakota Administrative Rules is “a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near as possible to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.”

The Vermillion East Fork: Antelope Lake aquifer is a relatively thin aquifer in some locations with a limited amount of water in storage. While the average annual withdrawal would not exceed average annual recharge to the aquifer, conditions may occur when the withdrawal exceeds recharge. When this occurs, water will be removed from storage, consequently reducing the saturated thickness of the aquifer. If the saturated thickness is reduced to the extent that the water rights/permits can no longer pump at their developed or “historically established” rates, this may be considered an adverse impact.

Conclusions

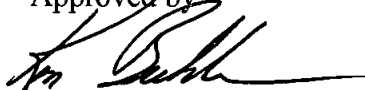
1. Water Permit Application No. 8262-3 proposes to appropriate water from the Vermillion East Fork: Willow Lake aquifer at a maximum diversion rate of 2.41 cfs for the irrigation of 168.35 acres located in the NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 33; T114N-R57W from two proposed wells about 70-90 feet deep to be located in S $\frac{1}{2}$ NE $\frac{1}{4}$ Section 33; T114N-R57W in Clark County.
2. There is a reasonable probability that water is available in the Vermillion East Fork: Willow Lake aquifer.
3. There is a reasonable probability that this application will not adversely impact existing water rights.



Whitney Kilts

SDDENR-Water Rights Program

Approved by



Ken Buhler

SDDENR-Water Rights Program

References

- Christensen, C.M. 1987. Geology and Water Resources of Clark County, South Dakota; Part I: Geology. South Dakota Geologic Survey Bulletin 29. Vermillion, SD.
- Hamilton, L.J. 1986. Geology and Water Resources of Clark County, South Dakota; Part II: Water Resources. South Dakota Geologic Survey Bulletin 29. Vermillion, SD.
- 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 3: Ground-Water Storage. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J. and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota, and Iowa. Task 7: Ground-Water Recharge. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Johnson, R. 2017. Utilities Manager. City of Willow Lake. Willow Lake, SD. Personal Communication. Mar. 9, 2017.
- SD Geological Survey. 2017. Lithological Logs Database, SD DENR-Geological Survey Program, Vermillion, SD.
- Water Rights. 1995-2016. "1994-2015 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Building, Pierre, South Dakota.
- Water Rights. 2017a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2017b. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2017c. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Affidavit of Publication

State of South Dakota

§

County of Clark

**NOTICE OF APPLICATION NO. 8262-3
to Appropriate Water**

Notice is given that Corey and Jennifer Tellinghuisen, 19152 SD Hwy 25, Bryant SD 57221 have filed an application for a water permit to appropriate 2.41 cubic feet of water per second from two wells to be completed into the Willow Lake management unit of the Vermillion East Fork Aquifer (70-90 feet deep) located in the S 1/2 NE 1/4 Section 33 for irrigation of 168.35 acres located in the NE 1/4, N 1/2 SE 1/4, SE 1/4 SE 1/4 Section 33; all in T114N-R57W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8262-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building,

523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by April 3, 2017.

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

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

Steven M. Pirner, Secretary,
Department of Environment and
Natural Resources.

Published once at the
total approximate cost of \$28.32.
3-22-17

William J. Krikac of said county, being first duly sworn, on oath says that he is the publisher of the **Clark County Courier**, a weekly newspaper printed and published in Clark in said County of Clark and has a full and personal knowledge of all the facts therein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

**Corey & Jennifer
Tellinghuisen**

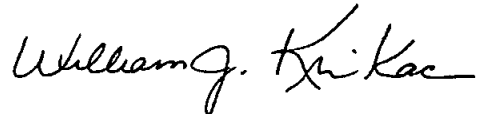
a printed copy of which taken from the paper in which same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once in each week for

One

successive week(s), on the day of each week on which said newspaper was regularly published, to wit:

March 22, 2017

that the full amount of the fees for the publication of the annexed notice is **\$28.32**



Subscribed and sworn to before me this


23rd day of March, 2017**RECEIVED****MAR 27 2017****WATER RIGHTS
PROGRAM**Notary Public
Clark County, South Dakota**My Commission expires: 06/04/2019**

Form 8

RECEIVED

MAR 30 2017

WATER RIGHTS
PROGRAM

DEPARTMENT
OF
ENVIRONMENT
AND NATURAL
RESOURCES

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Codington) SS

I, Jackie Wettestad

certify that the attached printed Notice was taken
from the 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:

March 22, 2017

Cost of Printing \$ 50.96

Jackie Wettestad
(Signature)

Accounting Clerk
(Title)

3/28/2017
(Date Signed)

NOTICE OF APPLICATION NO.

8262-3 to Appropriate Water

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Steven M. Pirmer, Secretary,
Department of Environment and
Natural Resources.

Published once at the total
approximate cost of 50.41.
(March 22, 2017)

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

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, March 15, 2017 10:13 AM
To: courier@itctel.com
Subject: 8252-3, Corey and Jennifer Tellinghuisen
Attachments: 8262-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on March 22, 2017.

Corey and Jennifer Tellinghuisen, 19152 SD Hwy 25, Bryant SD 57221 (605 625-2484 or cell 605 881-9646) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP.

Let me know if you have questions. Please acknowledge receipt of this email.

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



Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, March 15, 2017 10:14 AM
To: legals@thepublicopinion.com
Subject: 8252-3, Corey and Jennifer Tellinghuisen
Attachments: 8262-3public.short.docx; FORM8.FRM.doc

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





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

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

March 15, 2017

Corey and Jennifer Tellinghuisen
19152 SD Hwy 25
Bryant SD 57221

Dear Mr. and Mrs. Tellinghuisen:

Water Permit Application No. 8262-3 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 Clark County Courier printed at Clark SD (Ph # 605-532-3654) 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.

NOTICE OF APPLICATION NO. 8262-3 to Appropriate Water

Notice is given that Corey and Jennifer Tellinghuisen, 19152 SD Hwy 25, Bryant SD 57221 have filed an application for a water permit to appropriate 2.41 cubic feet of water per second from two wells to be completed into the Willow Lake management unit of the Vermillion East Fork Aquifer (70-90 feet deep) located in the S 1/2 NE 1/4 Section 33 for irrigation of 168.35 acres located in the NE 1/4, N 1/2 SE 1/4, SE 1/4 SE 1/4 Section 33; all in T114N-R57W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8262-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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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 10 2017

Corey & Jennifer Tellinghuisen
19152 SD Hwy 25
Bryant SD 57221

Dear Sir:

Enclosed is Water Permit No. 8262-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

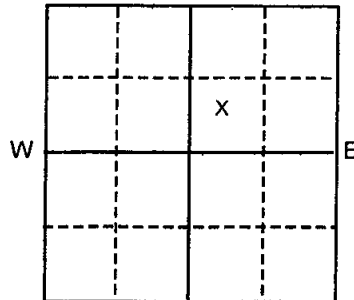
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW ¼ NE ¼ Sec 33 Twp 114 Rg 57W

County Clark

North

Please mark well
location with an "X"

Well Completion Date

May 25, 2017

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA:

If other describe ☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	0.0 FT	34.0 FT	19.75 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	11	Lb/gal	0.0 Ft	34.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Tremie Piped

SCREEN:

☒ Perforated pipe ☐ Manufactured
Diameter 12.00 Inches Length 10.0 Feet

Material PVC/STAINLESS

Slot Size .050 Set From 34.0 Feet to 44.0 Feet

Other information .070- SET FROM 44FT. TO 64FT.- LENGTH 20FT.

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? ChlorinatedLab to which water
quality sample sent for analysis ☐ No, Why Not?

Well Owner: Cory Tellinghuisen

Business Name:

Address: 19152 SD Hwy 25

City, State, Zip: Bryant SD 57221

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil	0	3
Clay Brown	3	16
Sand & Gravel Orange	16	23
Sand & Gravel	23	41
Sand- Med Gravel	41	51
Clay Blue	51	52
Sand- Med Gravel	52	67
Clay Blue	67	80

STATIC WATER LEVEL 13.0 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate 1,000.0 GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:
☐ Bailed
☐ Other

Pumping Level Below Land Surface

36.0 Ft. After 8.0 Hrs. pumped 1,000.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: 1,000.0 GPM

REMARKS

GPS: N44 38 24.5
W97 41 5.4

TH#7

Vermilion East Fork, Willow Lake AM

This well was drilled under license # 475 and this report is true and accurate.

Drilling firm: Thein Well Co., Inc.

Signature of License Representative

Signature of Well Owner or Equitable Property Holder:

Date:

RECEIVED

JUL 07 2017

WATER RIGHTS
PROGRAM



8262-3

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

JUN 26 2023

Cory & Jennifer Tellinghuisen
19152 SD Hwy 25
Bryant SD 57221

8262-3

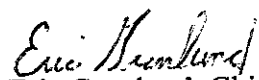
Dear Mr. & Ms. Tellinghuisen:

Enclosed is Water License No. 8262-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,


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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8262-3

(1) Cory & Jennifer Tellinghuisen; 19152 SD Hwy 25, Bryant SD 57221, made Application No. 8262-3, January 9, 2017, for a water permit to divert 2.41 cubic feet of water per second from groundwater, two wells (Vermillion East Fork: Willow Lake Aquifer), Clark County, South Dakota for irrigation purposes. Permit No. 8262-3, with a priority date of January 9, 2023, was approved April 3, 2017, and issued to the applicants for diversion of water with construction of the described water supply system to be completed on or before April 3, 2022, and for the application to beneficial use of water on or before April 3, 2026.

(2) It is certified that the permit holders have complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and are entitled to divert 2.22 cubic feet of water per second for beneficial use. The location of the diversion point is: *(only one well was developed)*

- 1,900 ft S & 2,630 ft E of the NE corner of Section 33, T114N, R57W (SW $\frac{1}{4}$ NE $\frac{1}{4}$)
(Latitude 44.64017 Longitude -97.68494)

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

Section 33, T 114N, R57W			
NW $\frac{1}{4}$ NE $\frac{1}{4}$	18.0 acres	NE $\frac{1}{4}$ SE $\frac{1}{4}$	32.0 acres
NE $\frac{1}{4}$ NE $\frac{1}{4}$	18.0 acres	SE $\frac{1}{4}$ SE $\frac{1}{4}$	16.0 acres
SE $\frac{1}{4}$ NE $\frac{1}{4}$	38.0 acres	NW $\frac{1}{4}$ SE $\frac{1}{4}$	8.0 acres
SW $\frac{1}{4}$ NE $\frac{1}{4}$	38.0 acres		
TOTAL: 168.0 acres			

(4) Pursuant to South Dakota Water Law 46-5-30.1 Cory & Jennifer Tellinghuisen, the holders and/or owners of Water Right No. 8262-3 is issued a license to appropriate water, the right to use 2.22 cubic feet of water per second from groundwater, one well (Vermillion East Fork: Willow Lake Aquifer), with a priority date of January 9, 2017, from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8262-3 and subject to the following qualifications:

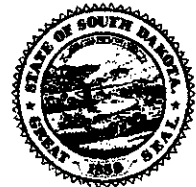
1. The well approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owners under this water right shall control their withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8262-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. *(The well was drilled by Thein Well Co. Inc. in 2017. A copy of the well completion report is on file with the Water Rights Program.)*

continued

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

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

JUN 26 2023
date



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8262-3

I have this day, June 8, 2023, made a thorough examination of the water use system constructed by Cory & Jennifer Tellinghuisen, 19152 SD HWY 25, Bryant, SD 57221 of Permit No. 8262, bearing the priority of January 9, 2017 authorizing the diversion of 2.41 cu. ft. per second of the waters of the Vermillion East Fork: Willow Lake Aquifer for irrigation purposes, in Clark County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Thein Well Co
- 2) No. of Wells 1
- 3) Depth(s) 44 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 12 inches
- 2) Length 34 feet
- 3) Type Plastic

Screen:

- 1) Type PVC/Stainless steel
- 2) Length 30 feet
- 3) Static water level 13 feet

Pump:

- 1) Make Mid-American Turbine
- 2) Model 11CH0
- 3) Size Unknown
- 4) Capacity 1000 GPM

Motor:

- 1) Make NIDEC
- 2) Model No. BF64A
- 3) Horsepower rating 75 hp

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

- 1) Type Buried PVC
- 2) Size 8 inches
- 3) Length 3800 feet

Comments: Services two (2) pivots

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make 2 - Reinke
- 2) Overall length 1300 & 900 feet
- 3) Number of towers 7 & 5
- 4) End gun Y
- 5) Capacity 1000 GPM

Chemigation Equipment:

- 1) Does chemigate Y

Comments: Uses commercially available injection equipment

D. Compliance with Permit Requirements:

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

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: WELL LOCATION
From the NE corner Sec 33, T114N, R57W, 1900 ft S & 2630 ft E, Lat 44.64017 Long -97.68494 (SW
¼ NE ¼).
2. The works are capable of diverting and conveying to the place of use 2.22 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

legal description/acreage

ALL IN: Sec 33, T114N, R57W

NW ¼ NE ¼ - 18.0 acres

NE ¼ NE ¼ - 18.0 acres

SE ¼ NE ¼ - 38.0 acres

SW ¼ NE ¼ - 38.0 acres

NE ¼ SE ¼ - 32.0 acres

SE ¼ SE ¼ - 16.0 acres

NW ¼ SE ¼ - 8.0 acres

comprising a total of 168.0 acres of land and the license should be issued for 2.22 cfs

3. All structures, wells and lands on map Y

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

The irrigated acreage was estimated with the aid of FSA imagery and ArcMAPS software.

The pump rate reported in a recent Irrigation Questionnaire was used to establish the system flow capacity.

The mailing address and the telephone number in the permit materials are current

I talked to Corey Tellinghuisen on the phone during the field inspection visit.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: **June 16, 2023**

Diversion Point Location

From the NE corner of
Sec 33 T114N-R57W
** Well**
1900 ft S & 2640 ft W
Lat 44.64017 Long -97.68494

Irrigated Land

Sec 33 T114N-R57W
NW1/4 NE 1/4 - 18.0 ac
NE 1/4 NE1/4 - 18.0 ac
SE1/4 NE1/4 - 38.0 ac
SW1/4 NE1/4 - 38.0 ac
NW1/4 SE 1/4 - 8.0 ac
NE 1/4 SE1/4 - 32.0 ac
SE1/4 SE1/4 - 16.0 ac

Well

Section 33
T114N-R57W

Reference
Corner



0 625 1,250 2,500 3,750 5,000 Feet