

WATER PERMIT NO. 7854-3

Name of Applicant: David Ulvestad

Address: 46720 201st St, Bruce SD 57220

Phone: 605 690-5537

Amount of Water Claimed: 0.89 cfs

Total Acres: NA

Source of Water Supply: groundwater (two wells)

Water to be used for: commercial dairy operation

County: Brookings

Type of Waste Disposal System:

Location: 2 miles northeast of Bruce

PRIORITY

Date Received: 6-4-13

Application/License Fee: \$ 1350

Corrected Application Received: 6-24-13

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: SW 1/4 SE 1/4 and SE 1/4 SW 1/4

Sec 29-T112N-R50W

Land to be Irrigated: NA

Depth of Well: 20 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 6-24-13

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

			29		

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7854-3</u> (office use only) Hydrologic Unit <u>10170202</u>
	Basin <u>Sioux River</u>
	Newspaper <u>Brookings Register Box 177</u>
	<u>57006-605-692-6271</u>

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JUN - 4 2013

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☐ Industrial	☒ Other <u>Dairy</u>	

Type of Application:
(check one)

☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

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

- Name of Applicant David Ulvestad Phone 605-690-5537
(check one) ☐ Owner ☒ Tenant/lessee
Mailing Address 46720 201st ST Bruce S.D. 57220
(Address) (City) (State) (Zip Code)
- Amount of water claimed 0.89 *CFS or 400 **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Ground
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Brookings
2 wells Section 24 112 N 50W (SW1/4 SE1/4)
(SE1/4 SW1/4)
- County or counties where water will be used Brookings
- Annual period during which water is to be used daily - year round Jan 1 - Dec 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)
Supply water drinking water to Northern Sky Dairy

STATE OF SOUTH DAKOTA)
County of Brookings) SS

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

I, David Ulvestad, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.Applicant's signature David UlvestadSubscribed and sworn to before me this 29th day of May 20 13Notary Public signature Michael J. Kelly
expires 6-28-2014

SOUTH DAKOTA
WATER PERMIT NO. 7854-3

Date of first receipt of application June 4, 2013.

Date of return to applicant for corrections, amendments or changes June 6, 2013.

Date of receipt of corrected application June 24, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7854-3 to David Ulvestad, 46720 201st St, Bruce SD 57220 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. 7854-3 appropriates 0.89 cubic feet of water per second from two wells to be completed into the Big Sioux:Brookings Aquifer (20 feet deep) located in the SW 1/4 SE 1/4 and the SE 1/4 SW 1/4 Section 29-T112N-R50W.
2. The water appropriated shall be used for the purpose of commercial use in a dairy cattle operation and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 7854-3 is September 9, 2013.
5. The date from which applicant may claim right is June 4, 2013.
6. One-fifth of the construction is to be completed on or before March 9, 2016.
7. All construction is to be completed on or before September 9, 2018.
8. Water is to be put to beneficial use on or before September 9, 2022.
9. 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. 7854-3 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. Permit No. 7854-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-112 for concentrated animal feeding operations.

(continued)

4. Permit No. 7854-3 is subject to compliance with all existing and applicable Water management Board Rules including but not limited to:
- a) Chapter 74:54:01 Ground Water Quality Standards,
 - b) Chapter 74:54:02 Ground Water Discharge Permit,
 - c) Chapter 74:51:01 Surface Water Quality Standards,
 - d) Chapter 74:51:02 Uses Assigned to Lakes,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

WATER MANAGEMENT BOARD

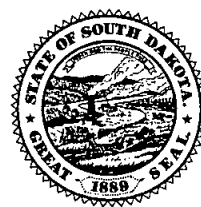
By: Jeanne Goodman

Jeanne Goodman, Chief Engineer
Water Rights Program

Department of Environment and Natural Resources

SEP 18 2013

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 20" Depth 40 ft
- b) Casing Type PVC Diameter 12" Thickness _____
- c) Screen Type SS Diameter 12 Thickness _____
- d) Gravel Pack P Rock Length of Gravel Pack 10 ft
- e) Depth to Top of Water Bearing Material 35 ft
- f) Depth to Water (ground surface to water level) 5 ft
- g) Distance to nearest existing domestic well:
- On applicant's property 1300 On property owned by others 1300 ft

2. Wastewater Disposal System Information

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

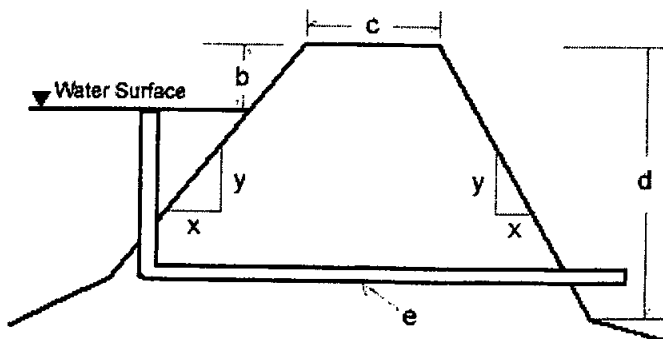
3. Dugout Information

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

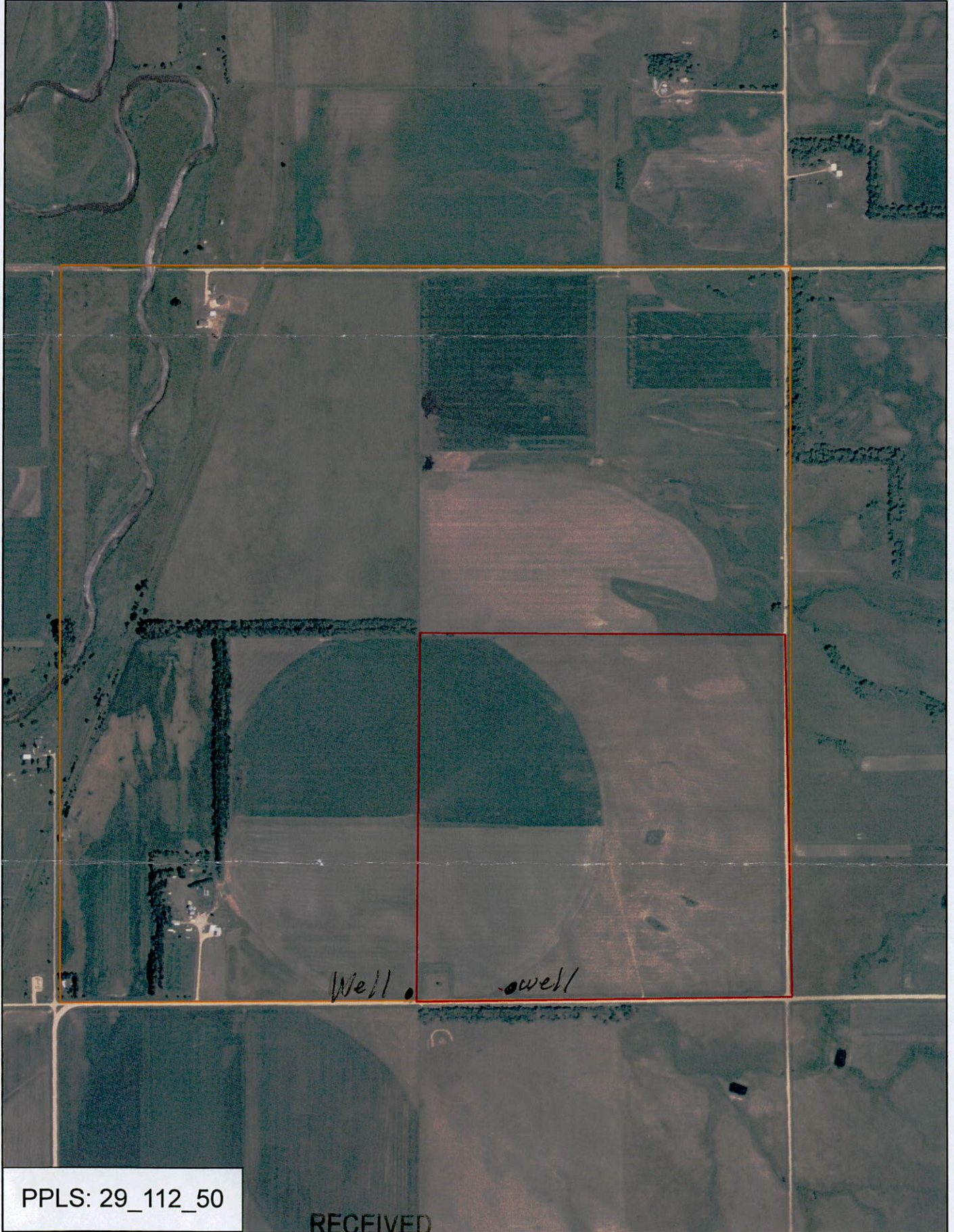
4. Water Storage Dams

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

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



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



PPLS: 29_112_50

Data use subject to license.

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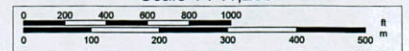
www.delorme.com

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Scale 1 : 11,200



1" = 933.3 ft

Data Zoom 14-2

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 6/24, 20 13

RECEIVED OF Maple Dairy D Ulvestad 15857 Bear Mtn Blvd Bakersfield CA 93311

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	100	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. _____	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	300 00

No. **06363**

By Jaime Goodman
Chief Engineer

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 6/5, 2013

RECEIVED OF Maple Dairy LP 15857 Bear Mountain Blvd Bakersfield CA 93311

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

Fee for Application for Permit No. _____ 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. _____		
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. **06356**

By Jeanne Goodman
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

June 6, 2013

David Ulvestad
46720 201st St
Bruce SD 57220

Dear Mr. Ulvestad:

Thank you for submitting the *Application for a Permit to Appropriate Water* for commercial use in a dairy operation. In order to complete the application, the following is required.

- The application/license fee for 400 gallons per minute is \$1,350.00. Please submit an additional ~~\$350.00.~~ ^{\$300.00}

If you have any questions, please contact me.

Sincerely,

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

enclosures

Gronlund, Eric

From: Roggow, Jason
Sent: Thursday, June 27, 2013 12:58 PM
To: Gronlund, Eric; Woodmansey, Kent
Subject: RE: Northern Sky Dairy in Brookings County

I spoke with Mr. Ulvestad this morning. He is the property owner to the north of the dairy where the well will be installed. He said there will be one well and it will be used for the already constructed Northern Sky Dairy, which he confirmed was previously called Valley View Dairy – this is not for a new dairy that will be built. He indicated that the new owners call the facility Northern Sky Dairy.

From: Roggow, Jason
Sent: Tuesday, June 25, 2013 11:19 AM
To: Gronlund, Eric; Woodmansey, Kent
Subject: RE: Northern Sky Dairy in Brookings County

It is possible these wells are for the permitted Valley View Dairy facility located in the next section to the south. Valley View is apparently also called Northern Sky. Valley View's engineer indicates the dairy is completely on rural water right now, they have done a test hole for one well, and the facility plans to apply for a water permit. Our review of Valley View's permit application indicated they were planning to use a combination of rural water and well water for the facility and our letters included standard language about contacting Water Rights to determine if they would need a water right permit.

I have a message into Mr. Ulvestad to call me back to confirm this is for the permitted site and not for a different new or expansion of the current dairy.

From: Gronlund, Eric
Sent: Tuesday, June 25, 2013 9:56 AM
To: Woodmansey, Kent
Cc: Roggow, Jason
Subject: Northern Sky Dairy in Brookings County

David Ulvestad filed a water permit application for two wells in Section 29, T112N, R50W to supply drinking water for Northern Sky Dairy. The application does not indicate how many animals are at the dairy.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7854-3, David Ulvestad**

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. 7854-3, David Ulvestad, 46720 201st Street, Bruce SD 57220.

The Chief Engineer is recommending APPROVAL of Application No. 7854-3-3 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, 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. 7854-3 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. Permit No. 7854-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-112 for concentrated animal feeding operations.
4. Permit No. 854-3 is subject to compliance with all existing and applicable Water management Board Rules including but not limited to:
 - a) Chapter 74:54:01 Ground Water Quality Standards,
 - b) Chapter 74:54:02 Ground Water Discharge Permit,
 - c) Chapter 74:51:01 Surface Water Quality Standards,
 - d) Chapter 74:51:02 Uses Assigned to Lakes,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

See report on application for additional information.


Jeanne Goodman, Chief Engineer
August 23, 2013

REPORT TO THE CHIEF ENGINEER

WATER PERMIT APPLICATION NO. 7854-3

David Ulverstad

August 23, 2013

Water Permit Application No. 7854-3 proposes to appropriate water at a maximum diversion rate of 0.89 cubic feet per second (cfs) from two wells to be completed into the Brookings management unit of the Big Sioux aquifer. The wells are expected to be approximately 20 feet deep, located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ and SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 29, T112N-R50W in Brookings County. Water will be used for commercial use in a 3,500 head dairy cattle operation permitted under the SD General Water Pollution Control Permit for concentrated animal feeding operations.

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

HYDROGEOLOGY:

The total areal extent of the Big Sioux: Brookings aquifer was determined by first combining the delineations of the Big Sioux aquifer system in Brookings, Kingsbury, Deuel, Hamlin, and Moody Counties (Hamilton, 1989; Hansen, 1988; Kume, 1985). Then, distinguishing the Brookings management unit was based on previously determined boundary locations of the Big Sioux aquifer management units (Hedges and others, 1982). In total, the Big Sioux: Brookings aquifer, shown in Figure 1, underlies approximately 323,000 acres. The Brookings management unit is hydraulically connected to the North management unit to the north, the Battle Creek aquifer to the west, the North Deer Creek, Unnamed Creek, Six Mile Creek, and Aurora management units of the Big Sioux aquifer to the east, and the Moody management unit to the south (Hedges and others, 1982). The aquifer is hydraulically connected to the many surface waters, specifically the Big Sioux River, and water in the aquifer generally moves from north to south and locally towards the river (Hamilton, 1989).

The Brookings management unit of the Big Sioux aquifer is an alluvium mantled outwash consisting of well-sorted, permeable, medium to coarse sand and fine to medium gravel. The aquifer is often under unconfined conditions near the Big Sioux River and can be confined elsewhere (Hamilton, 1989). From the average thickness of 30 feet and a commonly assumed storativity of 0.15, the Big Sioux: Brookings aquifer is estimated to contain 1,453,00 acre-feet (ac-ft) of recoverable water in storage (Hedges and others, 1982; Hamilton, 1989; Kume, 1985).

In Brookings and Kingsbury Counties, the top of the Big Sioux: Brookings aquifer ranges from ground surface to 212 feet below ground surface. Generally, the aquifer is underlain by till and, when buried, overlain by till. In these counties, water levels in the aquifer range from land surface to 120 feet below land surface. Wells in the Big Sioux: Brookings aquifer could yield up to 1,300 gallons per minute (gpm) (Hamilton, 1989).

Within one mile of the proposed well sites, aquifer materials occur from ground surface to a depth of 46 feet below ground surface (SD Geological Survey, 2013; Water Rights, 2013c).

Water levels in the Big Sioux: Brookings aquifer in this area fluctuate from 10 to 20 feet below ground surface (Water Rights, 2013a).

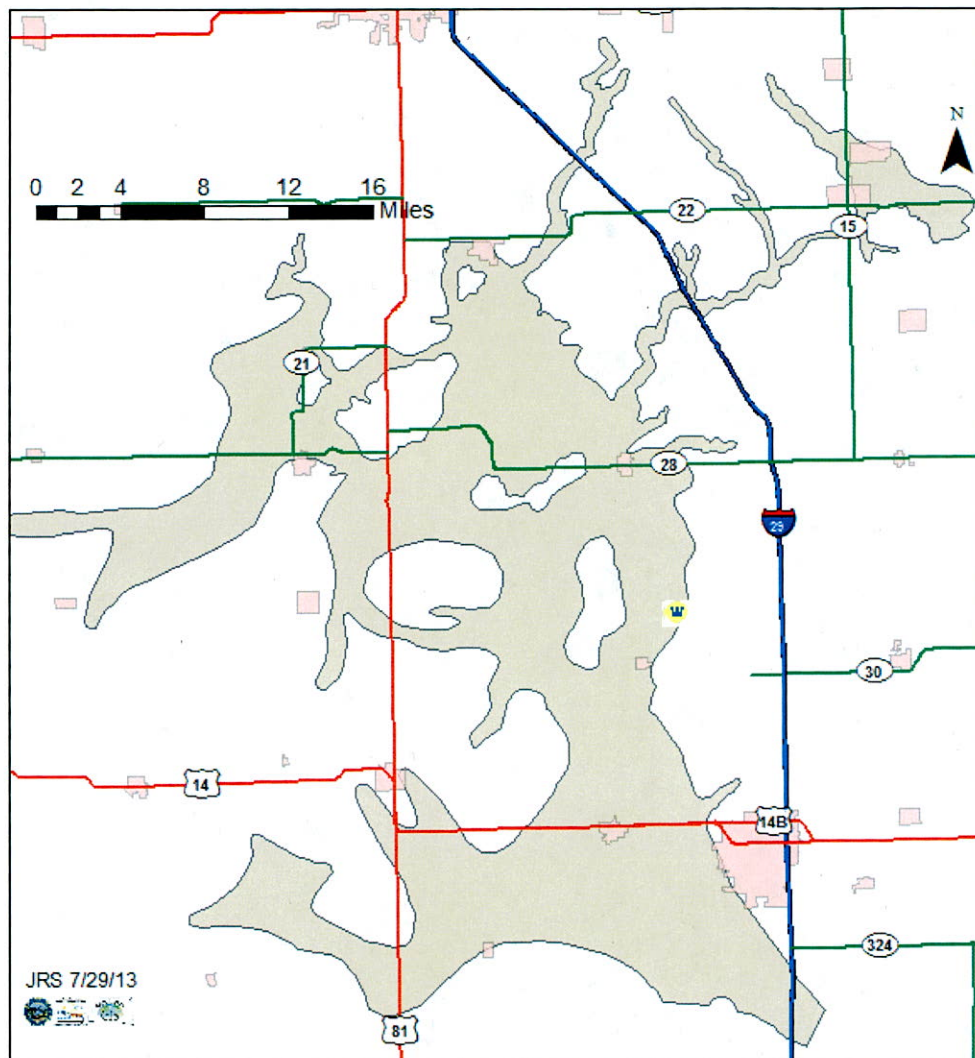


Figure 1: Areal extent of the Big Sioux: Brookings aquifer with proposed well sites indicated by blue 'W' (modified from Hamilton, 1989; Hansen, 1988; Hedges and others, 1982; Kume, 1985)

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:

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. Therefore, withdrawal/recharge issue must be considered.

HYDROLOGIC BUDGET:

Recharge:

Recharge to the Big Sioux: Brookings aquifer occurs through infiltration of precipitation in areas where the aquifer is at or near land surface, seepage through till, lake deposits, and underlying aquifers, and inflow from the Big Sioux River and its tributaries during wet years (Hamilton, 1989; Kume, 1985).

Hedges and others (1985) determined the average recharge to the entire Big Sioux aquifer system by base flow analysis to be 6.5 in/yr. Koch (1980) estimated average recharge to the Big Sioux aquifer in Brookings, Deuel, and Hamlin Counties by modeling to be 6.57 inches/year (in/yr) to the unconfined portions. Kume (1985) estimated recharge to the Big Sioux aquifer in Hamlin and Deuel Counties to be 5.11 in/yr. Hansen (1988) estimated recharge to the Big Sioux aquifer in Moody County by modeling to be on average 4.85 in/yr. Hedges and others (1985) estimated recharge specifically of the Brookings management unit by observation well analysis to be 4.0 in/yr; this is considered the best data available due to its emphasis on the management unit. Applying the recharge rate of this management unit to the area, recharge to the Big Sioux: Brookings aquifer is estimated to be 107,000 ac-ft/yr.

Koch (1980) indicates that even more water could be pumped than the estimated average recharge based on the concept of induced recharge from surface waters due to pumpage and capture of water to pumpage prior to evapotranspiration or natural outflow.

Discharge:

Discharge from the aquifer occurs through evapotranspiration in areas where the aquifer is at or near land surface, outflow to the Big Sioux River and its tributaries during dry years, and well withdrawals (Hamilton, 1989; Kume, 1985). There are a total of 246 water rights/permits appropriating water and nine future use permits reserving water from the Big Sioux: Brookings aquifer. Currently, the maximum diversion rate authorized totals 29.589 cfs, the volume appropriation totals 4,371 ac-ft/yr, and the volume future use reservation totals 5,317 ac-ft/yr (Water Rights, 2013b).

There are also two pending applications for this aquifer. Water Permit Application No. 7852-3 proposes to appropriate 210 ac-ft/yr and place 390 ac-ft/yr reserved by Future Use Permit No. 5094-3 to beneficial use. Future Use Permit Application No. 7853-3 proposes to reserve 2,400 ac-ft/yr. In total, these applications propose to appropriate/reserve an additional 2,610 ac-ft/yr (Water Rights, 2013b).

Brookings-Deuel-Kingbrook and Sioux rural water systems and the municipalities of Lake Norden and Volga are required to report withdrawals from the Big Sioux: Brookings aquifer for

some or all water rights/permits. Reported use of a public water supply system may not be an accurate reflection of expected use. In the case of some of these entities, reported withdrawals are sometimes well below appropriations. However, eventual use of an appropriation is often expected for public water supply systems to account for future growth. Each of these entities have future use permits and subsequently any appropriation permitted but not put to beneficial use can be reverted back to the future use reservation (Water Rights, 2013b).

Several municipalities are connected to a rural water system that is either used as a primary or standby, “back-up,” source. The municipalities of Clear Lake, Hayti, and Bruce currently use a rural water system as a primary source and their water rights/permits are retained as a standby source for security, such as fire protection (Water Rights, 2013b).

The amount of water that can be expected to be withdrawn by non-irrigation use water rights/permits and future use permits at the current appropriation/reservation amount can be estimated by assuming:

- 1) reported use of municipalities and rural water systems still expecting future growth is not considered,
- 2) water rights/permits limited by an annual volume will pump the entire volume appropriated annually,
- 3) water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time,
- 4) future use permits can be fully developed,
- 5) water rights/permits authorized to municipalities using rural water systems as a primary source will not pump, and
- 6) pending water permit and future use applications will be approved for the proposed appropriation/reservation and will withdraw water according to any of the previous assumptions.

Considering these water use expectations, 18,981 ac-ft/yr is estimated to be withdrawn from the Big Sioux: Brookings aquifer due to non-irrigation water rights/permits and future use permits (Water Rights, 2013b).

While there are numerous domestic wells on file, many are no longer used as primary sources since rural water systems have been introduced in the area. Considering this, and the relatively small withdrawal ability and authorization of a domestic well, the annual quantity of water withdrawn due to domestic wells is not significant to the hydrologic budget of the Big Sioux: Brookings aquifer (Water Rights, 2013c).

The historic irrigation use from the Big Sioux: Brookings aquifer is shown in Figure 2. Over the period of record, the average annual pumpage is 8,609 ac-ft/yr, but varies from a minimum of 1,043 ac-ft/yr to a maximum of 19,483 ac-ft/yr, while the annual appropriation has remained relatively constant over the last 20 years. This wide range of annual irrigation pumpage can be attributed to several unpredictable factors, namely economic and climatic conditions. For example, in 2012, historic drought conditions and high commodity prices resulted in water use being much greater than the average (Water Rights, 1980-2013). The expected use of irrigation water rights/permits is estimated to be the average pumpage reported over the entire period of record.

Hydrologic Budget:

The average annual recharge to the Big Sioux: Brookings aquifer is estimated to be 107,000 ac-ft/yr. The average annual withdrawal is expected to be approximately 36,110 ac-ft/yr. If the applicant pumps at the maximum diversion rate at the expected 60 percent of the time, withdrawal would equal 387 ac-ft/yr. Therefore, unappropriated water is available from the Big Sioux: Brookings aquifer to support the proposed appropriation.

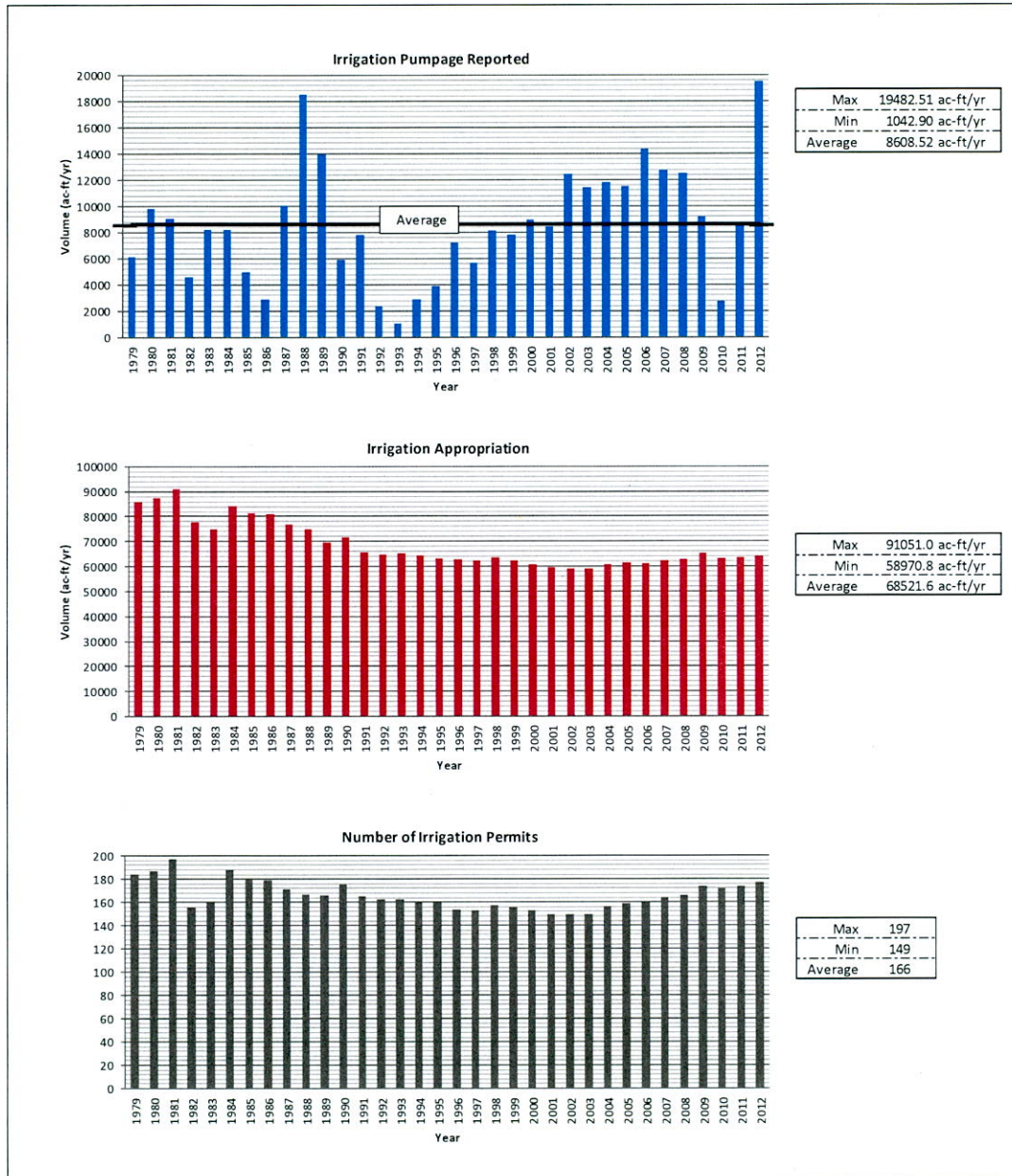


Figure 2: Historic irrigation water use from the Big Sioux: Brookings aquifer (Water Rights, 1980-2013)

OBSERVATION WELL DATA:

Administrative Rule of South Dakota Section 74:02:05:07 requires that “the Water Management Board shall rely upon the record of observation well measurements to determine that the quantity

of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.”

The SD DENR-Water Rights Program currently monitors 54 observation wells completed into the Big Sioux: Brookings aquifer that produce representative data of the aquifer. According to linear trend lines of the hydrographs, 46 of the 54 observations wells have recorded overall increasing water levels over their respective period of record (Water Rights, 2013a). A trend line depicts trends of the existing data and may be used to forecast future data.

Eight hydrographs of the representative wells have trend lines with a slope that is relatively level. For example, the hydrograph of observation well BG-75J is shown in Figure 4. While this decreasing trend line has a slope of -0.00013 in/yr, further examining the hydrograph verifies that water levels in this observation well has actually remained steady overall. Therefore, the decreasing slope does not demonstrate that withdrawal has exceeded recharge.

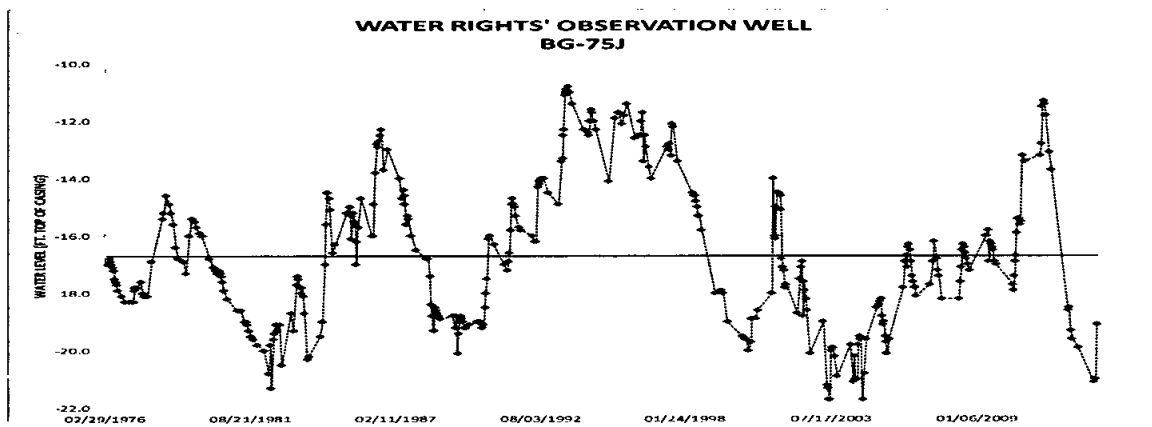


Figure 4: Hydrograph for observation well BG-75J with trend line (blue line) (Water Rights, 2013a)

Six observation wells are located near newly developed appropriations, which may cause water levels to decline. However, once the appropriations are fully developed, water levels should stabilize as recordings continue. For example, the hydrograph of observation well BG-75N, shown in Figure 5, has an overall trend line that indicates that overall water levels have decreased, especially since 2003. Consider, however, that this well is located near the Brookings-Deuel-Kingbrook joint well field, which increased pumpage to a greater consistent rate beginning in 2003. The observation well is within the cone of influence of pumping high capacity wells. As seen in the graph, the water table has stabilized since pumpage was increased.

Trend lines were created for water levels from 1975 to 2003 and 2003 to present, as shown in Figure 6. The trend line of water levels before 2003 show increasing water levels during that period of record. Since the water level decrease in 2003, water levels are again trending upward. The slopes of these trend lines are similar to trend lines of water levels for the same periods of record in other observation wells. Therefore, the water level declines are a record of drawdown due to pumping and do not reflect an overall decrease in water levels in the aquifer

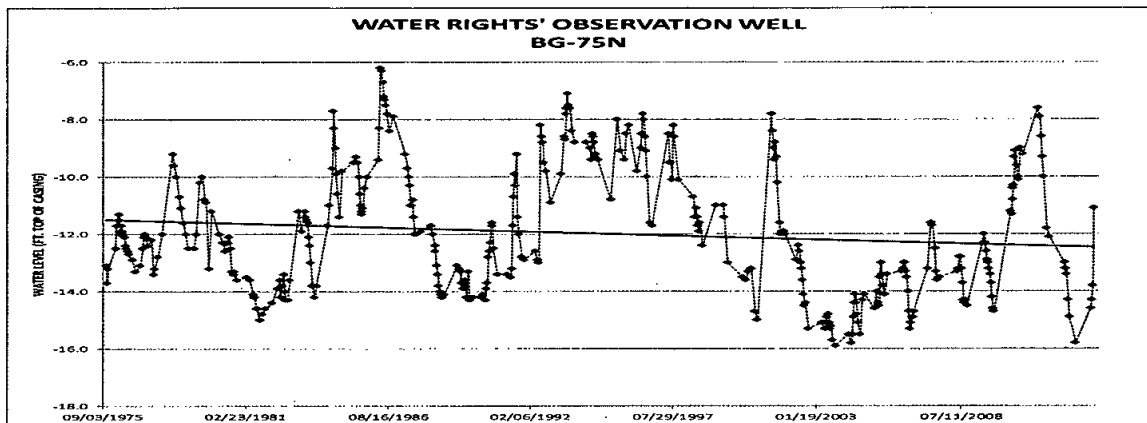


Figure 5: Hydrograph for observation well BG-75N with trend line (blue line) (Water Rights, 2013a)

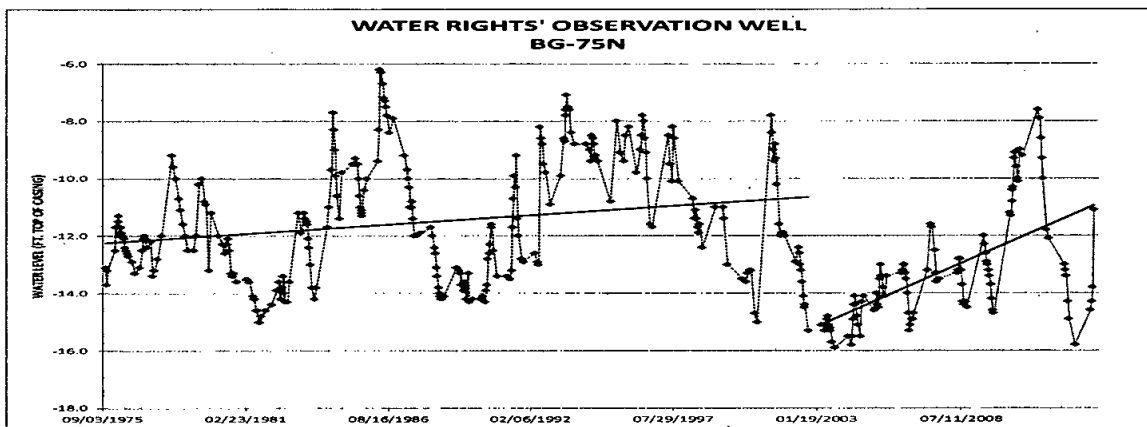


Figure 6: Hydrograph for observation well BG-75N with split trend lines (blue lines) (Water Rights, 2013a)

An observation well may be located near a large capacity well. During pumping, water levels decline rapidly and when pumping stops, water levels readily recover. For example, an irrigation water right is located within 1,000 feet of observation well DU-82A, which is located in a confined area of the aquifer. The year which pumpage was reported directly correlates to the water level declines recorded the hydrograph shown in Figure 7. Due to the distribution of years which pumping occurred, the trend line indicates that water levels have declined overall. However, removing the water level data that recorded drawdown will provide a more representative trend line. In this case, water levels in this observation well have actually remained steady overall.

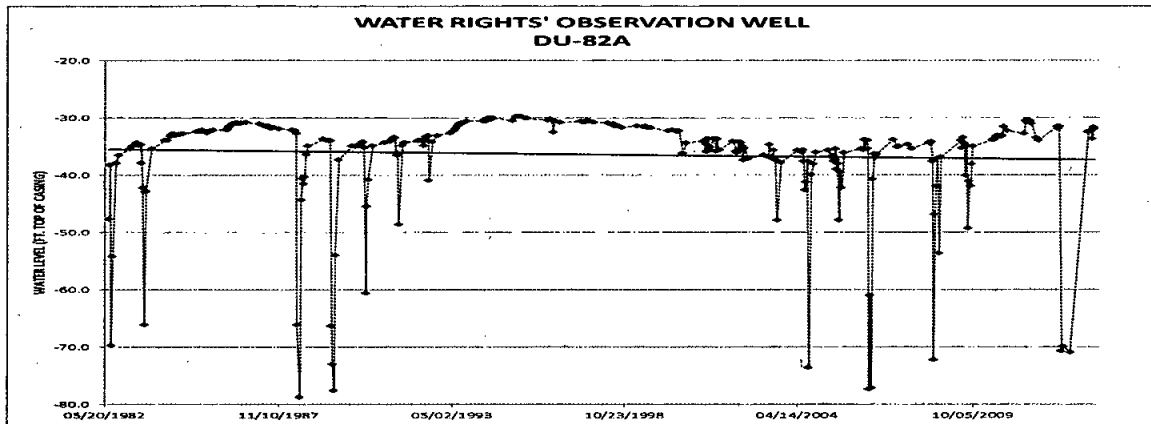


Figure 7: Hydrograph for observation well DU-82A with trend line (blue line) (Water Rights, 2013a)

Considering these factors that alter water level data and provide information that is not representative or accurate, there are no observation wells in the Big Sioux: Brookings aquifer that indicate that withdrawals have exceeded recharge.

The nearest observation well, BG-80C, is located approximately 140 feet south of the nearest proposed well. The hydrograph of this observation well is shown in Figure 8 (Water Rights, 2013a). This hydrograph is typical of many observation wells recording water levels in the Big Sioux: Brookings aquifer. Water levels in these observation wells often display cyclic conditions, recharging during wet years and declining during dry years.

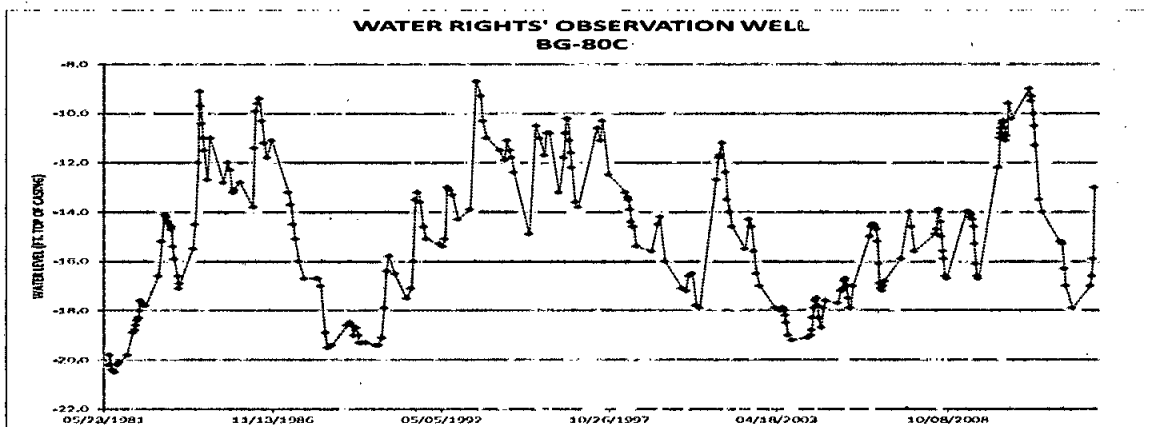


Figure 8: Hydrograph for observation well BG-80C (Water Rights, 2013a)

The data documents that at the current level of development temporal well withdrawal is masked by climatic conditions and recharge to and natural discharge from the aquifer exceeds well withdrawal. Therefore, that unappropriated water is available from the Big Sioux: Brookings aquifer to support the proposed appropriation.

EXISTING WATER RIGHTS:

There are several wells completed into the Big Sioux aquifer in the area of the proposed well sites, as shown in Figure 9. Considering that the Big Sioux River is a strong hydraulic boundary,

the proposed wells are not expected to cause interference in wells located on the west bank, including the future use area authorized to the Brooking-Deuel-Kingbrook joint well field. There are eight water rights/permits and five domestic wells on file within two miles of the proposed well sites and on the east bank of the Big Sioux River, shown in Table 1.

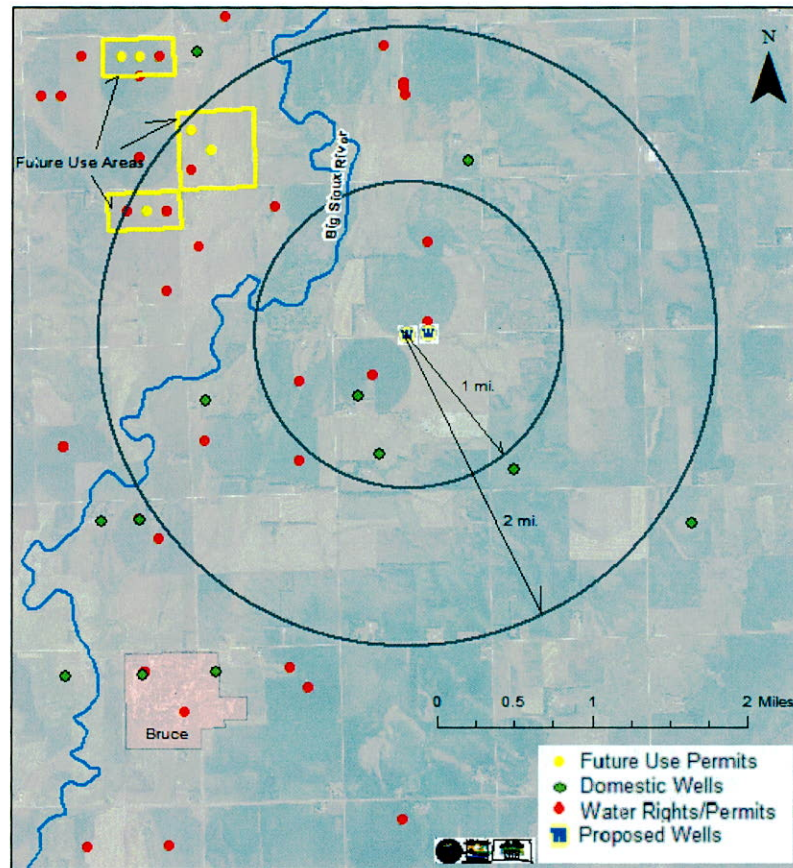


Figure 9: Existing water rights in the area of the proposed well sites (Water Rights, 2013a; Water Rights, 2013b)

Table 1: Water rights/permits and domestic wells on file completed into the Big Sioux: Brookings aquifer within two miles of the proposed well sites and on the east bank of the Big Sioux River (Water Rights, 2013b; Water Rights, 2013c)

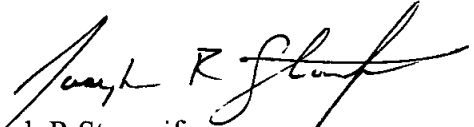
Name	Status	Permit Number	Priority Date	Use	Rate (cfs)	Acres	Distance (mi)
Frieda E Holter	Water Right	2071-3	03/22/1974	Irrigation	1.5	128	0.34
Warren C Ulvestad	Water Right	3204-3	08/26/1976	Irrigation	2	278	0.47
Layne R Mostad	Water Right	4462-3A	12/20/1979	Irrigation	1.11	128	0.63
David Holter				Domestic			0.66
Dave & Darwin Ulvestad	Water Right	2072-3	03/22/1974	Irrigation	1.11	140	0.76
David Ulvestad	Water Permit	7237-3	03/07/2011	Irrigation	1.56	120	0.85
Richard Eide				Domestic			0.89
Wesley Ulvestad	Water Right	2126-3	10/09/1974	Irrigation	1.11	144	1.08
Mike Reitz				Domestic			1.08
Don Bombeck				Domestic			1.10
Stacy Bultnm				Domestic			1.53
Jay A Peterson	Water Right	6722-3	12/02/1974	Irrigation	1.33	156	1.65
Jay A Peterson	Water Right	6722-3	12/02/1974	Irrigation	1.33	156	1.65
Jerald A Peterson	Water Right	5170-3	12/13/1976	Irrigation	1.78	136	1.86
Jay A Peterson	Water Right	6722-3	12/02/1974	Irrigation	1.33	156	1.89

The nearest well appears to be located approximately one third mile of the nearest proposed well (Water Rights, 2013b; Water Rights, 2013c). The water table conditions of the aquifer in this area and the proximity to the Big Sioux River dictate that drawdown due to pumping would probably not extend far from the proposed well sites. Koch (1980) determined, from an aquifer pump test conducted within two miles of the proposed well sites, the aquifer in this area has average hydraulic conductivity of 600 feet/day (ft/d) and a specific yield of 0.11. The aquifer is approximately 32 feet thick at the proposed well sites (SD Geological Survey, 2013). If the wells pump at the maximum proposed 0.89 cfs continuously for one year, drawdown at 0.34 miles from the proposed wells is expected to be 1.1 feet ("Theis Equation Calculator"). The Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. Therefore, nearby adequate wells are not expected to be adversely or unlawfully impaired by the proposed diversion.

While the withdrawals would not exceed recharge of the aquifer as a whole, this cumulative impact of withdrawals could lead to a reduction of water levels to the extent that water rights/permits can no longer pump at their developed or "historically established," diversion rates, which could be considered an adverse impact. If approved, the water permit should control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

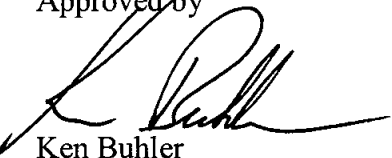
CONCLUSIONS:

1. This water permit application proposes to appropriate water at a maximum diversion rate of 0.89 cfs from two wells to be completed into the Big Sioux: Brookings aquifer for commercial use. The wells are expected to be approximately 20 feet deep, located in Brookings County.
2. Unappropriated water is available from the Big Sioux: Brookings aquifer to supply the proposed appropriation.
3. The proposed diversions at the proposed well locations are not expected to adversely or unlawfully impair existing nearby adequate wells.



Joseph R Stonesifer
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Hamilton, L.J. 1989. Water Resources of Brookings and Kingsbury Counties, South Dakota. Water-Resources Investigations Report 88-4185, 82 p. USGS, Huron, South Dakota.
- Hansen, H.S. 1988. Appraisal of the Water Resources of the Big Sioux Aquifer, Moody County, South Dakota. Water-Resources Investigations Report 87-4057. USGS, Huron, South Dakota.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J., and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 7: Ground Water Recharge. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Koch, N.C. 1980. Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota. Water-Resources Investigations Report 80-100. USGS, Huron, South Dakota.
- Kume, J. 1985. Water Resources of Deuel and Hamlin Counties, South Dakota. Water-Resources Investigations Report 84-4069. USGS, Huron, South Dakota.
- SD Geological Survey. 2013. Lithologic Logs Database, South Dakota Department of Environment & Natural Resources Geological Survey, Vermillion, South Dakota.
- "Theis Equation Calculator." I-calcul8 Calculators and Tools. 28 July 2013
< <http://www.icalcul8.com/theis.php> >
- Water Rights. 1980-2013. "Annual Irrigation Summary by Aquifer": SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Affidavit of Publication

10/

State of South Dakota

ss

Exhibit "A"

County of Brookings

Jennifer Milligan of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

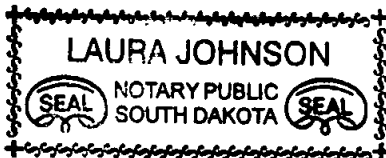
Leg#739 App#7854-3

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

August 30, 2013

said Exhibit "A" inures to the sole benefit for the publishers of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

twenty-three dollars and twenty-three cents \$23.23



[Signature]
3rd _____ day of

2013

September

[Signature: Laura Johnson]

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

Legal 739, 1x, 8/30
NOTICE OF APPLICATION NO. 7854-3 to
Appropriate Water
Notice is given that David Ulvestad, 46720 201st St, Bruce SD 57220 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from two wells to be completed into the Big Sioux:Brookings Aquifer (20 feet deep) located in the SW 1/4 SE 1/4 and the SE 1/4 SW 1/4 Section 29-T112N-R50W. The water is for commercial use in a dairy cattle operation. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7854-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 9, 2013. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$23.23.

RECEIVED

SEP 13 2013

SURFACE WATER PROGRAM



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

August 23, 2013

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7854-3 to Appropriate Water. Please publish the notice once on August 30, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is David Ulvestad, 46720 201st St, Bruce SD 57220 (Ph # 605-690-5537).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

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

August 23, 2013

David Ulvestad
46720 201st St
Bruce SD 57220

Dear Mr. Ulvestad:

Water Permit Application No. 7854-3 for commercial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Brookings Register printed at Brookings SD (Ph # 605-692-6271). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

Instruction to Newspaper - Publish the Notice on August 30, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7854-3 to Appropriate Water

Notice is given that David Ulvestad, 46720 201st St, Bruce SD 57220 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from two wells to be completed into the Big Sioux:Brookings Aquifer (20 feet deep) located in the SW 1/4 SE 1/4 and the SE 1/4 SW 1/4 Section 29-T112N-R50W. The water is for commercial use in a dairy cattle operation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. xx because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 9, 2013.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Published once at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

SEP 18 2013

David Ulvestad
46720 201st St
Bruce SD 57220

Dear Mr. Ulvestad:

Enclosed is Water Permit No. 7854-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

7854-3

07-92

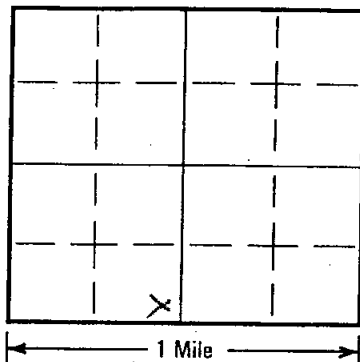
Location SE 1/4 NW 1/4 Sec 29 Twp 112 N Rg 50 W
 County Brookings North

Please mark well location with an "X"

W

E

Well-Completion Date

11-8-13Well Owner: Pick HassenBusiness Name: Northern Lakes DairyAddress: 20165 468th Ave.
Brookings, S.Dak. 57220

WELL LOG:

DEPTH

FORMATION

FROM

TO

Topsoil	0	1
Sandy clay	1	13
Gravel	13	34 1/2

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 1/4 mile from Farm yard (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Bucket- Fake CasingCASING DATA: ☒ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>15</u> LB/FT	<u>12</u> IN	<u>1 1/2</u> FT	<u>27 1/2</u> FT	<u>20</u> IN
<u>12.25</u> LB/FT	<u>12</u> IN	<u>7</u> FT	<u>27 1/2</u> FT	<u>20</u> IN
<u>10</u> LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Benbide</u>	_____	_____ lb./gal	<u>7</u> ft	<u>15</u> ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure Pressure at 6'SCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 12 IN Length 7 FEETMaterial PVC 160Slot Size D80 Set From 27 1/2 Feet to 34 1/2 Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION: Was well disinfected upon completion?

YES, How: _____

NO, Why Not? _____

Chlorine

Laboratory sent to for water quality analysis

Industrial permitSTATIC WATER LEVEL .15' Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: Sub☐ Bailed _____☐ Other _____

Pumping Level Below Land Surface

27 ft. After 1 Hrs. pumped 1,000 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

RECEIVED

DEC 18 2013

WATER RIGHTS PROGRAM

This well was drilled under license # 111-1

And this report is true and accurate.

Drilling firm Laco, Well Drilling

Signature of License Representative:

James R. Riddle, Inc.

Signature of Well Owner or Equitable Property Holder:

W. H. H.Date: 11-8-13

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7854-3

I have this day, May 29, 2024, made a thorough examination of the water use system constructed by David Ulvestad, 46720 201st St, Bruce, SD 57220 of Permit No. 7854-3, bearing the priority of June 4, 2013 authorizing the diversion of 0.89 cu. ft. per second of the waters of Big Sioux:Brookings Aquifer for commercial dairy purposes, in Brookings County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Lacey Well Drilling
- 2) No. of Wells 1
- 3) Depth(s) 34.5 feet
- 4) Well log is available Y If no, explain in comments

Comments: xx

Casing:

- 1) Diameter 12 inches
- 2) Length 27.5 feet
- 3) Type Steel (0 to 7 ft); Plastic (7 to 27.5 ft)

Screen:

- 1) Type PVC 160
- 2) Length 7 feet
- 3) Static water level 15 feet

Pump:

- 1) Make Submersible
- 2) Model Unknown
- 3) Size Unkown
- 4) Capacity 200 GPM

Motor:

- 1) Make Unknown
- 2) Model No. Unknown
- 3) Horsepower rating Unknown hp

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

- 1) Type PVC 2) Size 6 inches 3) Length 2,100 feet

Comments: "L" shape; south of well then east to barn

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) 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
2. From the SE corner Sec 29 T112N R50W, 50 ft N & 2,685 ft W, Lat 44.47117 Long -96.85831 (SE ¼ SW ¼).
3. The works are capable of diverting and conveying to the place of use 0.44 cu. ft. per second of water which is to be used for commercial dairy use.

The license should be issued for 0.44 cfs (200 gpm).

4. All structures, wells and lands on map Y

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

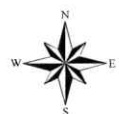
The contact person for the dairy and the Water Permit is Josh TeVelde (cell 559/805-3271) whose mailing address is Northern Sky Dairy, 20165 468th Ave, Bruce, SD 57220.

Only one (1) well was constructed which is suppling 200 gpm to the dairy according to Mr. TeVelde. The dairy is also on Rural Water.



Darrell DeBoer
Water Rights Inspector
DENR, Water Rights Program

Date report completed: May 31, 2024





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 17 2024

7854-3

David Ulvestad
46720 201st St
Bruce SD 57220

Dear Mr. Ulvestad:

Enclosed is Water License No. 7854-3. 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.

So 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. 7854-3**

(1) David Ulvestad, 46720 201st St, Bruce SD 57220, made Application No. 7854-3, June 4, 2013, for a water permit to divert 0.89 cubic feet of water per second from groundwater, two wells (Big Sioux: Brookings Aquifer), Brookings County, South Dakota for commercial purposes. Permit No. 7854-3, with a priority date of June 4, 2013, was approved September 9, 2013, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 9, 2018, and for the application to beneficial use of water on or before September 9, 2022.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.44 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 50 ft N & 2,685 ft W of the SE corner Section 29, T112N, R50W (SE ¼ SW ¼)
(Latitude 44.47117 & Longitude -96.85831)

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use in a commercial dairy cattle operation.

(4) Pursuant to South Dakota Water Law 46-5-30.1 David Ulvestad, the holder and/or owner of Water Right No. 7854-3 is issued a license to appropriate water, the right to use 0.44 cubic feet of water per second from groundwater, one well (Big Sioux: Brookings Aquifer), with a priority date of June 4, 2013, from the location specified in (2) of this license for commercial purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7854-3 and subject to the following qualifications:

1. The wells approved under Permit No. 7854-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights. *(Only one of the two authorized wells was constructed.)*
2. The wells authorize by Permit No. 7854-3 shall be construction be 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. *(The well was drilled in 2013 by Lacey Well Drilling. A copy of the well completion report is on file with the Water Rights Program.)*
3. Water Right No. 7854-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-112 for concentrated animal feeding operations.
4. Water Right No. 7854-3 is subject to compliance with all existing and applicable Water Management Board Rules including but not limited to:
 - a) Chapter 74:54:01 Ground Water Quality Standards
 - b) Chapter 74:54:02 Ground Water Discharge Permit
 - c) Chapter 74:51:01 Surface Water Quality Standards
 - d) Chapter 74:51:02 Uses Assigned to Lakes
 - e) Chapter 74:51:03 Uses Assigned to Streams
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

Eric Gronlund

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

JUN 17 2024

date

