

WATER PERMIT NO. 8289-3

Name of Applicant: **Farmers Pork (west site)**

Address: **PO Box 188, Pipestone MN 56164** Phone: **507 825-4211**

Amount of Water Claimed: **0.067** Total Acres: **NA**

Source of Water Supply: **groundwater (1 existing well)**

Water to be used for: **commercial** County: **McCook**

Type of Waste Disposal System:

Location: **1 mile north and 4 miles west of Salem**

PRIORITY Date Received: **6-15-16** Application/License Fee: **\$ 300**

Corrected Application Received: Period of Annual Use: **January 1 – December 31**

Remarks: **Existing swine facility**

Diversion Point: **SE 1/4 SE 1/4 Sec 5-T103N-
R55W**

Facility Location: **S 1/2 SE 1/4 Sec 5 – T103N-
R55W**

Depth of Well: **308 feet deep**

Well Driller: **Dave Putzke Well Drilling**

Remarks:

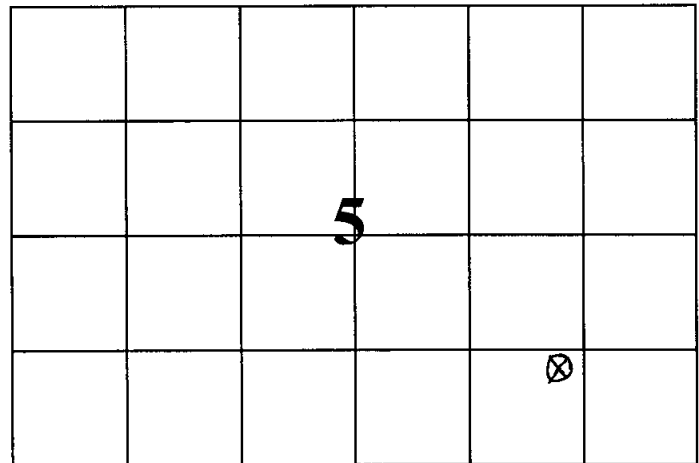
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **6-15-17**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



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JUN 15 2017

WATER RIGHTS
PROGRAM

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8289.3</u>	(office use only) Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>	
	Newspaper <u>Salem Special</u>	
	<u>Daily Leader, Madison</u>	

Application For Permit To Appropriate Water Within The State Of South Dakota**Check use(s) of water:**

☐ Municipal	☐ Water Distribution System	☐ Recreational	☐ Institutional
☐ Rural Water System	☒ Commercial	☐ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other _____	

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.)

1. Name to Appear on Water Permit Farmers Pork (west site)

Mailing Address 1400 S. Hwy 75, PO Box 188 Pipestone MN 56164
(Address) (City) (State) (Zip Code)

Phone (507) 825-4211 Mobile _____ Email barry.kerkaert@pipestone.com

2. Amount of water claimed 0.067 *CFS or 30 **GPM and 36.3 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use)

3. Source of water supply SE 1/4

4. Location of point of diversion SE 1/4 of Section 5, T103N, R55W County McCook
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☐ No

If "Yes," where will water be used? E 1/2 SE 1/4 Sec 5 - T103N - R55W (facility location)
(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used McCook6. Annual period during which water is to be used January 1 thru December 31

7. 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)

The Farmers Pork (west site) is an existing swine facility that will house a maximum of 4,344 head of swine.
 The CAFO Permit has been issued by the SD DENR.

I, Barry Kerkaert Managing Partner, 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. 8289-3**

Date of first receipt of application June 15, 2017.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8289-3 to Farmers Pork, c/o Barry Kerkaert, PO Box 188, Pipestone MN 56164 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. 8289-3 (west site) appropriates 36.3 acre-feet annually at a maximum diversion rate of 0.067 cubic feet of water per second (cfs) from one existing well completed into the Sioux Quartzite aquifer (308 feet deep) located in the SE 1/4 SE 1/4 Section 5 for commercial use in a swine livestock confinement operation located in the E 1/2 SE 1/4 Section 5; all in T103N-R55W.
2. The water appropriated shall be used for the purpose of commercial use 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. 8289-3 is September 11, 2017.
5. The date from which applicant may claim right is June 11, 2017.
6. One-fifth of the construction is to be completed on or before March 11, 2020.
7. All construction is to be completed on or before September 11, 2022.
8. Water is to be put to beneficial use on or before September 11, 2026.
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 well approved under Water Permit No. 8289-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit No. 8289-3 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.
3. Water Permit No. 8289-3 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

(continued)

4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Sioux Quartzite aquifer.
5. Water Permit No. 8289-3 authorizes a total annual diversion of 36.3 acre feet of water.

WATER MANAGEMENT BOARD

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

OCT 02 2017
date



Supplemental Information

(type or print)

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1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)

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

b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by Putzke Well Drilling & Repair

For either Existing or Proposed Wells:

c) Well Depth (required) 308 Depth to Top of Water Bearing Material 200 Depth to Water from Surface 90

d) Distance to nearest domestic well on applicant's property none Property owned by others unknown

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)

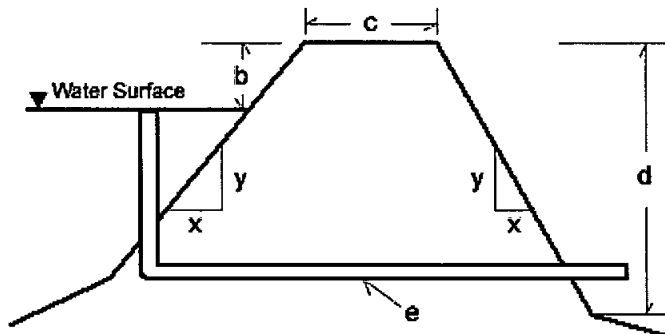
Upstream _____

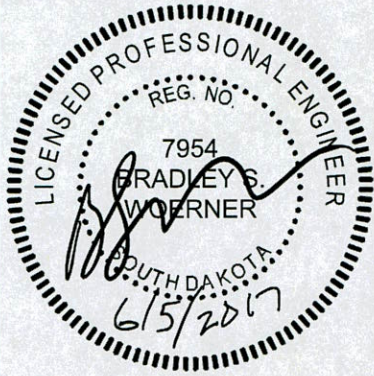
Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





1" = 200'



STOCKWELL
STOCKWELL ENGINEERS, INC.
215 WALNUT ST.
YANKTON, SD 57078
PH: 605.665.8092
FAX: 605.665.0523

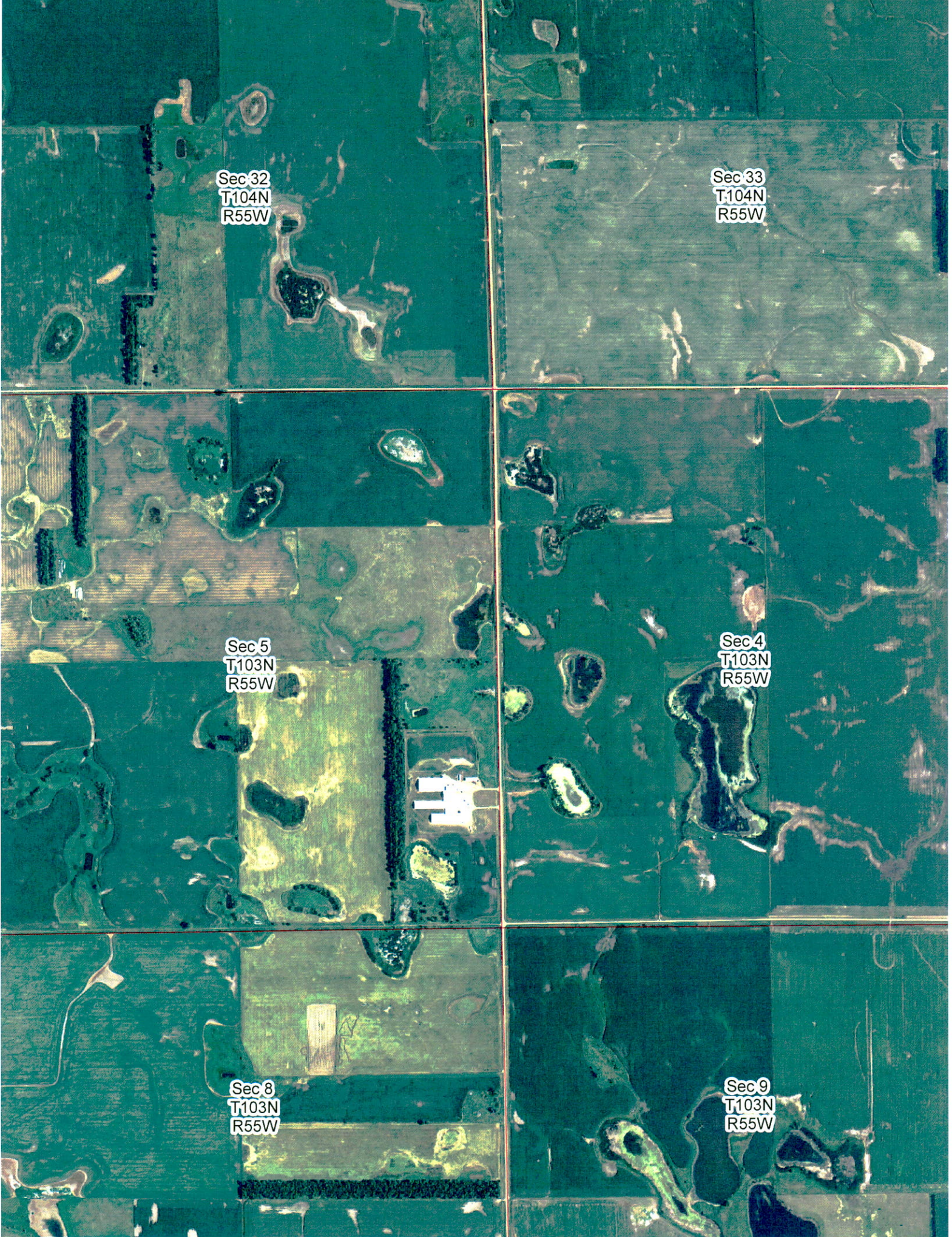
Farmers Pork
McCook County
NW 1/4, 4-103-55

REVISION SCHEDULE	
ISSUE/REVISION	DATE

SEI PROJECT #: 15155

Water Rights

WEST



Sec 32
T104N
R55W

Sec 33
T104N
R55W

Sec 5
T103N
R55W

Sec 4
T103N
R55W

Sec 8
T103N
R55W

Sec 9
T103N
R55W

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date June 15, 2017

RECEIVED OF Salem Farms

PO Box 370 Pipestone, MN 56164

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

Fee for Application for Permit No. <u>8289-3</u> 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. <u>8289-3</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	300 00

No. **08272**

By

Jeanne Goodman *VM*
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8289-3, Farmers Pork (West Site)**

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. 8289-3 Farmers Pork, c/o Barry Kerkaert, PO Box 188, Pipestone MN 56164.

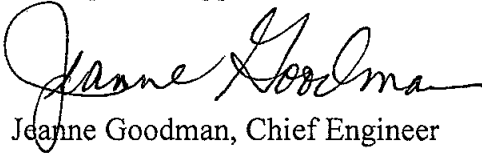
The Chief Engineer is recommending APPROVAL of Application No. 8289-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and, 4) it is in the public interest with the following qualifications:

1. The well approved under Water Permit No. 8289-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit No. 8289-3 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.
3. Water Permit No. 8289-3 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

(continued)

4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Sioux Quartzite aquifer.
5. Water Permit No. 8289-3 authorizes a total annual diversion of 36.3 acre feet of water.

See report on application for additional information.

A handwritten signature in cursive script, appearing to read "Jeanne Goodman".

Jeanne Goodman, Chief Engineer

Report to the Chief Engineer
Water Permit Application Nos. 8289-3 and 8290-3
Farmers Pork
August 1, 2017

Water Permit Application No. 8289-3 for Farmers Pork (west site) c/o Barry Kerkaert proposes to appropriate 36.3 acre-feet of water annually at a maximum diversion rate of 0.067 cubic feet per second (cfs) from the Sioux Quartzite aquifer. The diversion point for this application is an existing well located in the SE ¼ SE ¼ Section 5 for commercial use at a swine facility located in the E ½ SE ¼ Section 5; all in T103N-R55W in McCook County.

Water Permit Application No. 8290-3 for Farmers Pork (east site) c/o Barry Kerkaert proposes to appropriate 64.5 acre-feet of water annually at a maximum diversion rate of 0.10 cfs from the Sioux Quartzite aquifer. The diversion point for this application is an existing well located in the SW ¼ NW ¼ Section 4 for commercial use at a swine facility located in the SW ¼ NW ¼ Section 4; all in T103N-R55W in McCook County.

Aquifer: Sioux Quartzite (SOUX)

Hydrogeology and Aquifer Characteristics

The well completion reports for Farmers Pork (east and west sites) list the wells for these applications as completed into “granite.” Given the location and geology of the area this “granite” is interpreted as the Sioux Quartzite (McCormick, 2010 and Tomhave and Schulz, 2004), which Baldwin (1949) noted is sometimes locally referred to as the “Sioux Falls granite.” The well completion report for the west site reported the top of the Sioux Quartzite at 198 feet below grade and a total well depth of 308 feet. The reported static water level at well completion (1/9/1998) was 90 feet below grade. The well completion report for the east site reported the top of the Sioux Quartzite at 218 feet below grade and a total well depth of 494 feet. The reported static water level at well completion (11/30/2016) was 85 feet below grade. This indicates the aquifer is under confined conditions in the area of these well sites.

The Sioux Quartzite is a Precambrian age ortho-quartzite, a sedimentary formation that consists of primarily pink and red colored quartz sand cemented into a nonporous quartzite by silica (Baldwin, 1949). The Sioux Quartzite extends over a regional scale underlying portions of southeastern South Dakota, southwestern Minnesota, and northwestern Iowa (Tomhave, 1994). Mapping of the Precambrian surface by McCormick (2010) indicates that depth to the Sioux Quartzite can change over a short distance. This rugged and craggy upper surface is likely the product of pre-glacial streams that incised irregular valleys on the quartzite surface (Baldwin, 1949).

The primary porosity of the Sioux Quartzite is generally extremely low, except in areas where the silica cement is not present due to either weathering or non-deposition (Baldwin, 1949). In areas where conditions are favorable, water can be transmitted through the Quartzite through secondary porosity and permeability features (i.e. fractures and joints) resulting in areas where the Quartzite can be considered an aquifer. Aquifer characteristics within the Sioux Quartzite are site specific and highly variable due to the unpredictable nature of the fractures and joints in the aquifer.

Estimates of the maximum thickness of the Sioux Quartzite vary from 3,000 feet (Baldwin, 1949) to less than 1,000 feet (Gries, 1983). However, wells for water supply typically only penetrate the Sioux Quartzite to a depth of 200 feet or less (Buhler, 2017). Nearby, the Sioux Quartzite can be directly overlain by either Sioux Quartzite Wash, the Carlile Shale, the Niobrara Formation, undifferentiated Cretaceous-age material, and glacial material (both outwash and till) (SDGS, 2017; Tomhave and Schulz, 2004; and Jensen, 2008). The Sioux Quartzite is likely hydraulically connected to overlying aquifers in direct contact with the quartzite to some extent. However the extent of any hydraulic connections between the quartzite and other aquifers in McCook County likely varies by locality and are not well understood due to the lack of a detailed hydrogeologic study of the Sioux Quartzite in McCook County.

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 there is unappropriated water available for the applicant's proposed use, the proposed diversion can be developed without unlawful impairment of existing rights, and the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and potential effects on existing rights from the aquifer that are pertinent to this application.

Water Availability

The probability of unappropriated water being available from the Sioux Quartzite 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. An application may be approved, however, for withdrawals of groundwater from any formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems." Additionally, pursuant to SDCL 46-1-6 (17) a water distribution system is defined as "a system of piping, valves, storage tanks, pumps, and appurtenances by which water is conveyed for domestic or municipal use by a common distribution system, including a municipality as defined in § 9-1-1, a nonprofit rural water supply company as defined in § 10-36A-1, a water user district as defined in § 46A-9-2, a sanitary district as defined in chapter 34A-5, or homes, including mobile homes as defined in

§ 32-3-1, and manufactured homes as defined in § 34-34A-1.1 supplied by a common distribution system.” Here, the Sioux Quartzite aquifer is older than the Greenhorn Formation. However, a water distribution system not is involved, so water availability in the aquifer will need to be considered.

Hydraulic Budget

Discharge from the Sioux Quartzite is from well withdrawals and leakage to hydraulically connected aquifers where the potentiometric gradients are favorable (a higher water level in the quartzite than in an overlying hydraulically connected aquifer would indicate potential for upward leakage). There are currently 59 water rights/permits authorized to appropriate water from the Sioux Quartzite of which 51 are for non-irrigation use.

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. Of the municipalities that have water rights for the Sioux Quartzite, the majority have connected to rural water systems (Drinking Water, 2016; Friedeman, 2017; and Buhler, 2017) and do not use much or any water from their wells. The remaining water rights/permits that authorize withdrawals have a total instantaneous diversion rate of 26.68 cfs. Of this amount, a single appropriation (Water Right No. 5400-3 for LG Everest Inc.) is for 12.25 cfs for quarry dewatering. Spencer Quarries Inc. holds water rights totaling 4.9 cfs for quarry dewatering. For water rights/permits limited to an annual volume, full use of that volume is assumed for estimation of average annual withdrawal. Water rights/permits in the aquifer limited to an annual volume total to 92.03 acre-feet per year. This results in an estimated average annual non-irrigation use of less than 11,576 acre-feet per year.

There are eight water rights/permits appropriating water from the Sioux Quartzite for irrigation use. These water rights/permits and their average reported irrigation use is summarized in Table 1. Water Right Nos. 6451-3 and 6553-3 do not have a qualification for reporting annual irrigation use (Water Rights, 2017b). Average annual irrigation use by Water Right Nos. 6451-3 and 6553-3 is estimated to be less than their permitted limitations of two acre feet annually per acre, especially in the case of Water Right No. 6451-3, which is qualified for use only when water restrictions for the City of Sioux Falls are implemented. Authorizing a total of seven acres for irrigation the average annual withdrawal for Water Right Nos. 6451-3 and 6553-3 is estimated at less than 14 acre-feet per year. This results in an estimated average annual irrigation use of less than 300 acre-feet per year.

Table 1: Irrigation Water Rights/Permits from the Sioux Quartzite (Water Rights, 1991-2017)

Permit No.	Status	Acres	Average Reported Use (acre-feet)	Years of Constructed System Data
5365-3	LC	1.5	1.21	6 (1990-1995)
6195-3	LC	61	91.62	17
6451-3	LC	3	no data	not reporting
6553-3	LC	4	no data	not reporting
6618-3	LC	71	76.75	11
6910-3	LC	80	6.58	7
7805-3	LC	8	4.44	4
7415-3	PE	34	104	4
Total		262.5	284.6	
LC-license, PE-permit				

Recharge to the Sioux Quartzite is from infiltration of precipitation where the Sioux Quartzite is at or near land surface or from hydraulically connected aquifers where the potentiometric gradients are favorable (a lower water level in the quartzite than in an overlying hydraulically connected aquifer would indicate potential for downward leakage) (Lindgren and Niehus, 1992). Recharge to the Sioux Quartzite has not been quantified. Therefore, data is not available to quantitatively compare the estimated average annual recharge to estimated average annual withdrawal in the aquifer.

A qualitative examination of average annual recharge with average annual withdrawals from the aquifer can be accomplished by considering water level trends in the aquifer. The Water Rights Program does not monitor any observation wells completed into the Sioux Quartzite aquifer (Water Rights, 2017a), so the availability of historical water level data is limited. Some insight into historic water levels can be gained by reviewing the well completion reports on file with the Water Rights Program, however evaluating historic water levels using domestic well data is more subjective than the use of dedicated observation wells because of the additional interpretations necessary (i.e. well locations/elevations, groundwater gradients, and seasonal and climatic water level fluctuations).

A review of area well completion reports on file with the Water Rights Program (Water Rights, 2017c) indicates water levels in the Sioux Quartzite in this area have historically been relatively stable. Furthermore when considering at the wells for these applications, the elevation of ground surface is approximately the same the well site, and static water levels at the time of well completion (1998 and 2016) were approximately the same. If water levels in an aquifer decline over time, it maybe suggestive of withdrawal exceeding recharge. Since available water level information is indicating relatively stable water levels in the area, withdrawals from the aquifer have not exceeded recharge. Data from Lindgren and Niehus (1992) indicates water levels in the Sioux Quartzite show a correlation with long-term precipitation trends. Water levels that follow long-term precipitation trends typically undergo cyclic conditions, rising during wet years and declining during dry years. Available information indicates the aquifer appears to behave similarly in this area. Available information indicates that water levels in the Sioux

Quartzite aquifer in this area are stable. Since recharge to and groundwater outflow from an aquifer can be captured for well withdrawals, the withdrawals proposed by this application are not expected to cause the withdrawals from the Sioux Quartzite aquifer to exceed the average annual recharge to the aquifer.

Existing Users

Water rights/permits within 10 miles of the well sites for these applications and currently authorized to appropriate water from groundwater sources are shown in Figure 1 and summarized in Table 2. Groundwater sources for these water rights/permits are the Sioux Quartzite (SOUX), the Sioux Quartzite wash (SXWS), and Pleistocene series aquifers (PS: U) (Water Rights, 2017b). The nearest water right/permit to the wells for these applications is Water Permit No. 6874-3 located approximately 3.1 miles to the southeast. The available information for Water Right Nos. 6874-3 and 6862-3 (identified at permitting as being completed into the Sioux Quartzite wash aquifer) indicate the geologic material the wells for these water rights are completed into either directly overlies the Sioux Quartzite or is only separated from the Sioux Quartzite by a relatively thin layer of geologic material (six feet in the case of the well for Water Right No. 6874-3). Buhler (2000) notes potential for a hydraulic connection between the Sioux Quartzite and the geologic material for the wells of the City of Salem due to water quality characteristics of the wells. The City of Salem utilizes drinking water produced by the city's wells (Drinking Water, 2016). The nearest water right/permit completed into the Sioux Quartzite is Water Right No. 4271-3 for the City of Spencer located about 7.5 miles to the west southwest. The City of Spencer obtains its drinking water from the Hanson County Rural Water System (Drinking Water, 2016). The two water rights for Spencer Quarries are for dewatering purposes and have historically reported pumping averaging 1,654 acre-feet per year for dewatering purposes (Water Rights, 2003-2016). Since the wells for these applications are both completed into the same water source and are in relatively close proximity (0.47 miles), drawdown as a result of pumping from the wells will likely impact each other before any potential impacts would be noted by other water rights/permits in the area. The nearest domestic well on file with the Water Rights Program completed into the Sioux Quartzite is reported as being located approximately one mile south (Water Rights, 2017c). However, there are other farm sites closer that could potentially have wells completed into the Sioux Quartzite.

Table 2: Summary of Water Rights/Permits shown in Figure 1 (Water Rights, 2017b)

Permit No.	Name	Status	Aquifer	Use	Rate (cfs)	Acres
4271-3	City of Spencer	LC	SOUX	MUN	0.13	n/a
4493-3	Spencer Quarries Inc.	LC	SOUX	COM	1.8	n/a
6135-3	McCook County Wildlife Club	LC	PS:U	COM	0.022	n/a
6070-3	Spencer Quarries Inc.	LC	SOUX	COM	3.1	n/a
6749-3	James D. Daniels	PE	PS:U	IRR	0.55	22
6862-3	City of Salem	LC	SXWS	MUN	1.33	n/a
6874-3	McCook Country Club	LC	SXWS	IRR & DOM	0.11	30

LC-license, PE-permit, mun- municipal, com- commercial, irr- irrigation, dom- domestic

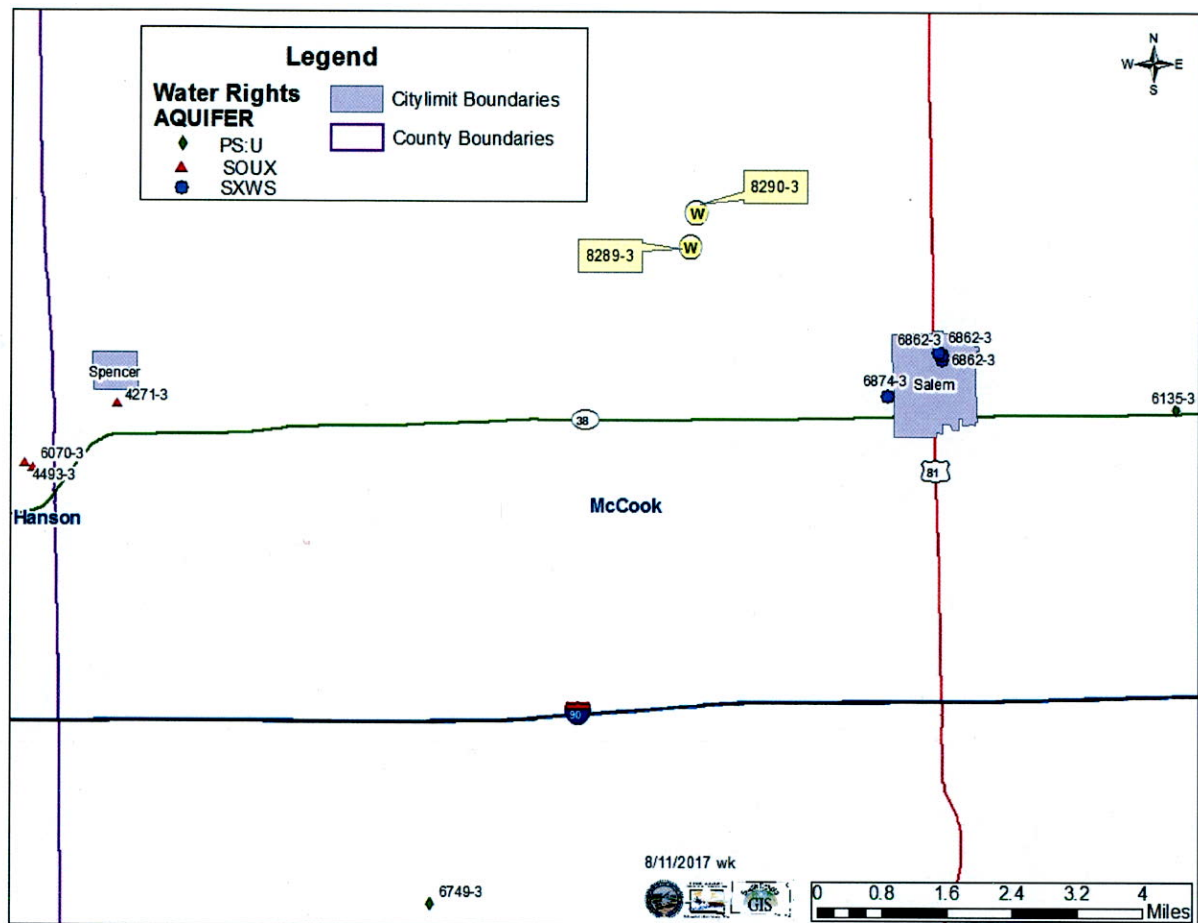


Figure 1: Water rights/permits within 10 miles of the well sites for these applications currently authorized to appropriate water from groundwater sources (Water Rights, 2017b)

Administrative Rule of South Dakota (ARSD) 74:02:04:20(7) defines an adversely impacted domestic well as “a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner's needs.” While in most aquifers 20 feet is an adequate depth of water for prior users and domestic wells, in the Sioux Quartzite 20 feet below the top of the aquifer is seldom a sufficient depth for a well to be a dependable water supply. To further complicate the consideration of adverse impact in the Sioux Quartzite, maximum drawdown that could result from pumping a large capacity well is limited by well depth rather than aquifer thickness. So provided that a well is adequate as defined by ARSD 74:02:04:20(6), the assessment of well interference being an adverse impact would have to consider well depth.

Minimum well depth is not regulated, however ARSD 74:02:04:60 specifies requirements for the installation of pumps in wells. The rule requires that the depth of the pump placement be determined by dividing the specific capacity of the well into the required yield and adding at least 10 additional feet. Therefore, the minimum depth of the pump placement as

determined by ARSD 74:02:04:60 could be used as a quasi-minimum well depth standard. If well depth allowed for pump placement per ARSD 74:02:04:60 and well interference requires the well be deepened, that interference could be considered an adverse impact. However, if the affected well is not deep enough to allow compliance with the requirements of ARSD 74:02:04:60, interference that would require deepening of the well would not be considered an adverse impact. Additionally, the use of the pump placement standard does not fix the pump placement to the static water level or the specific capacity of the well at the time of construction. Instead the pump setting and well depth would need to allow for climatic fluctuations of the static water level and/or a change in specific capacity of the well.

Given the distances involved and the relatively low diversion rates requested by these applications, any well interference experienced by existing wells as a result of pumping under these applications, if approved, is not expected to be adverse. Additionally, one of these wells has existed since 1998 with no record of complaints associated with it. There have been concerns expressed over the impacts of the dewatering activities at Spencer Quarries impacting water levels in the Sioux Quartzite (Buhler, 2000). However, in the Findings of Fact for Water Right No. 6070-3 the Water Management Board concluded that there was insufficient evidence to link well production issues cited by the intervenor to dewatering activities at the quarry. Additionally, the diversion rates requested by these applications (0.067 cfs and 0.10 cfs) are significantly less than the amount permitted for Spencer Quarries (4.9 cfs).

Conclusions

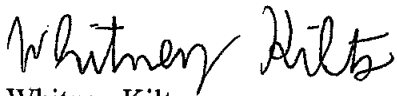
1. Water Permit Application No. 8289-3 for Farmers Pork (west site) proposes to appropriate 36.3 acre-feet of water annually at a maximum diversion rate of 0.067 cfs from the Sioux Quartzite aquifer. The diversion point for this application in one existing well located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 5 for commercial use at a swine facility located in the E $\frac{1}{2}$ SE $\frac{1}{4}$ Section 5; all in in T103N-R55W.
2. Water Permit Application No. 8290-3 for Farmers Pork (east site) proposes to appropriate 64.5 acre-feet of water annually at a maximum diversion rate of 0.10 cfs from the Sioux Quartzite aquifer. The diversion point for this application in one existing well located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 4 for commercial use at a swine facility located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 4; all in T103N-R55W.
3. Available information indicates that in the area of the well sites for these applications the Sioux Quartzite is a viable aquifer.
4. Average annual recharge to the Sioux Quartzite in South Dakota has not been quantified; however since recharge to and groundwater outflow from an aquifer can be captured for well withdrawals the appropriations proposed by this application are not

expected to cause the withdrawals from the Sioux Quartzite aquifer to exceed the average annual recharge to the aquifer.

5. The Water Rights Program does not monitor any observation wells completed into the Sioux Quartzite.

6. Potential for unlawful impairment in the Sioux Quartzite would need to be assessed pursuant to both ARSD 74:02:04:20(7) and ARSD 74:02:04:60.

7. Available information indicates that any well interference as a result of these applications, if approved, is not expected to be adverse.

A handwritten signature in black ink, appearing to read "Whitney Kilts". The signature is fluid and cursive, with the first name "Whitney" written in a larger, more prominent script than the last name "Kilts".

Whitney Kilts

SDDENR-Water Rights Program

References

- Baldwin, B. 1949. A Preliminary Report on Sioux Quartzite: South Dakota Geological Survey Report of Investigations No. 63.
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Water Rights. 2003-2016. 2003-2016 Non-irrigation Water Use Reports: 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.

SEP 05 2017

Thursday, Aug. 31

AFFIDAVIT OF PUBLICATION

WATER RIGHTS
PROGRAM

STATE OF SOUTH DAKOTA }
County of Lake } ss.

Aubrey Larsen of the City of Madison, County of Lake,
State of South Dakota, being first duly sworn on oath, deposes and says:

The Madison Daily Leader is a daily legal newspaper of general circulation, printed and published in the City of Madison, in said County of Lake, by Hunter Publishing, Inc., Jon M. Hunter, publisher, and has been such legal newspaper during the times hereinafter mentioned; that the said Madison Daily Leader has been in existence as such legal newspaper for more than one year prior to the publication of the notice hereunto attached, and has during all of said time had, and how has, more than 200 bona fide subscribers; that the undersigned, the affiant, is the Secretary of the said newspaper, in charge of the advertising department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed

Department of Environment & Natural Resources

Notice of Application Nos:8289-3 & 8290-3 to Appropriate Water

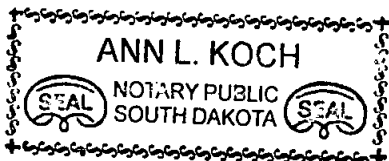
printed copy of which hereunto attached, was printed and published in the said newspaper for One successive weeks, once each week and on the same day of the week, on the following dates, to-wit:

On Thursday, the 31st day of August, 2017;
On _____, the _____ day of _____, 20____;
On _____, the _____ day of _____, 20____;
On _____, the _____ day of _____, 20____;
On _____, the _____ day of _____, 20____;
On _____, the _____ day of _____, 20____;
On _____, the _____ day of _____, 20____;
On _____, the _____ day of _____, 20____;

That \$ 34.20 being the full amount of the fees for publication of the attached notice inures solely for the benefit of the publisher of the said newspaper; that no arrangement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.

Aubrey Larsen

Subscribed and sworn to before me this 1st day of
September, 2017



Ann L. Koch
Notary Public, Lake County, South Dakota

NOTICE OF APPLICATION
NOS. 8289-3 and 8290-3
to Appropriate Water

Notice is given that Farmers Pork, c/o Barry Kerkaert, PO Box 188, Pipestone MN 56164 has filed the following applications for a water permit.

Application No. 8289-3 (west site) proposes to appropriate 36.3 acre-feet annually at a maximum diversion rate of 0.067 cubic feet of water per second (cfs) from one existing well completed into the Sioux Quartzite aquifer (308 feet deep) located in the SE 1/4 SE 1/4 Section 5 for commercial use in a swine livestock confinement operation located in the E 1/2 SE 1/4 Section 5; all in T103N-R55W.

Application No. 8290-3 (east site) proposes to appropriate 64.5 acre-feet annually at a maximum diversion rate of 0.10 cfs from one existing well completed into the Sioux Quartzite aquifer (464 feet deep) located in the SW 1/4 NW 1/4 Section 4 for commercial use in a swine livestock confinement operation located in the SW 1/4 NW 1/4 Section 4; all in T103N-R55W. Both projects are located approximately one mile north and four miles west of the town of Salem.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8289-3 and 8290-3 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

Publication Fees _____ \$

Notary Fees _____ \$

Total _____ \$

Received Payment,

RECEIVED

SEP 05 2017

WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of McCook) SS

I, Troy Schwans

certify that the attached printed Notice was
taken

from the Salem Special

printed and published in Salem

County of McCook and

state of South Dakota. The notice was
published

in the newspaper on the following date:

8/31/17

Cost of Printing \$36.48

Troy Schwans
(Signature)

Owner
(Title)

8/31/17
(Date Signed)

Public

NOTICE OF APPLICATION
NOS. 8289-3 and 8290-3 to
Appropriate Water

Notice is given that Farmers Pork, c/o
Barry Kerkaert, PO Box 188, Pipestone
MN 56164 has filed the following
applications for a water permit.

Application No. 8289-3 (west side)
proposes to appropriate 36.3 acre-feet
annually at a maximum diversion rate of
0.067 cubic feet of water per second (cfs)
from one existing well completed into the
Sioux Quartzite aquifer (308 feet deep)
located in the SE 1/4 SE 1/4 Section 5
for commercial use in a swine livestock
confinement operation located in the SE
1/2 SE 1/4 Section 5; all in T103N-R55W.

Application No. 8290-3 (east side)
proposes to appropriate 64.5 acre-feet
annually at a maximum diversion rate of
0.10 cfs from one existing well completed
into the Sioux Quartzite aquifer (444
feet deep) located in the SW 1/4 NW 1/4
Section 4 for commercial use in a swine
livestock confinement operation located
in the SW 1/4 NW 1/4 Section 4; all in
T103N-R55W. Both projects are located
approximately one mile north and four
miles west of the town of Salem.

Pursuant to SDCL 46-2A-2, the Chief
Engineer recommends APPROVAL of
Application Nos. 8289-3 and 8290-3 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 September 11,
2017.

Notice

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 \$36.48.

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, August 23, 2017 1:52 PM
To: ads@madisondailyleader.com
Subject: 8289-3 and 8290-3, Farmers Pork
Attachments: 8289-3&8290-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on August 31, 2017.

Farmers Pork, c/o Barry Kerkaert, PO Box 188, Pipestone MN 56164 (507 825-4211) 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 to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

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, August 23, 2017 8:54 AM
To: Salem Special / Troy Schwans (tschwans@triotel.net)
Subject: 8289-3 and 8290-3, Farmers Pork
Attachments: FORM8.FRM.doc; 8289-3&8290-3public.short.docx

Attached is a notice to be published on August 31, 2017.

Farmers Pork, c/o Barry Kerkaert, PO Box 188, Pipestone MN 56164 (507 825-4211) 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 to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

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, August 23, 2017 8:54 AM
To: 'phohbach@mitchellrepublic.com'
Subject: FW: 8289-3 and 8290-3, Farmers Pork
Attachments: FORM8.FRM.doc; 8289-3&8290-3public.short.docx

delete

Attached is a notice to be published on August 31, 2017.

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

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.**

August 18, 2017

Farmers Pork
Barry Kerkaert
PO Box 188
Pipestone MN 56164

Dear Dr. Kerkaert:

Water Permit Application Nos. 8289-3 and 8290-3 filed by Farmers Pork (West & East sites) 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 Salem Special printed at Salem SD (Ph# 605-425-2361) and the Daily Leader printed at Madison SD (Ph # 605- 256-4555). 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 31, 2017. The applicant is responsible for payment.

NOTICE OF APPLICATION NOS. 8289-3 and 8290-3 to Appropriate Water

Notice is given that Farmers Pork, c/o Barry Kerkaert, PO Box 188, Pipestone MN 56164 has filed the following applications for a water permit.

Application No. 8289-3 (west site) proposes to appropriate 36.3 acre-feet annually at a maximum diversion rate of 0.067 cubic feet of water per second (cfs) from one existing well completed into the Sioux Quartzite aquifer (308 feet deep) located in the SE 1/4 SE 1/4 Section 5 for commercial use in a swine livestock confinement operation located in the E 1/2 SE 1/4 Section 5; all in T103N-R55W.

Application No. 8290-3 (east site) proposes to appropriate 64.5 acre-feet annually at a maximum diversion rate of 0.10 cfs from one existing well completed into the Sioux Quartzite aquifer (464 feet deep) located in the SW 1/4 NW 1/4 Section 4 for commercial use in a swine livestock confinement operation located in the SW 1/4 NW 1/4 Section 4; all in T103N-R55W. Both projects are located approximately one mile north and four miles west of the town of Salem.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8289-3 and 8290-3 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 September 11, 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 _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

OCT 02 2017

Farmers Pork
c/o Barry Kerkaert
PO Box 188
Pipestone MN 56164

Dear Mr. Kerkaert:

Enclosed are Water Permit Nos. 8289-3 (west site) and 8290-3 (east site) authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

A Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed for each permit. Please return this completed form after you have finished the systems 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 information 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

8289-3

RECEIVED

OCT 04 2018

WATER RIGHTS
PROGRAM

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

Date 9/27/18

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

FROM: Farmers Park
(name)
P.O. Box 188
(address)
Pipestone MN 56164 507 825 4211
(city, state, zip) (phone)

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

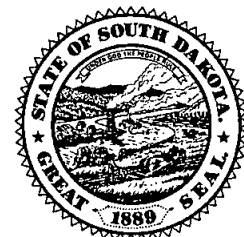
Water Permit No. 8289-3 ~~8289-3~~ states that the water use system is to be constructed by 9/11/22, and water is to be put to beneficial use by 9/22/26.
(date) (date)

The water use system was completed on July 1 2017.
(date)

Applying the water to beneficial use was completed on Aug 1 2017.
(date)

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

[Signature]
(signature)



8289-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

October 5, 2018

Barry Kerkaert
PO Box 188
Pipestone MN 56164-0188

Dear Mr. Kerkaert:

I am writing to acknowledge receipt of the "Notice of Completion of Works" forms you sent in for the following permits:

Nos. 8289-3 & 8290-3: Farmers Pork – McCook County
No. 8291-3: Jackrabbit Family Farms – Davison County
No. 8301-3: Fox Run RE, LLC – Turner County
No. 8333-3: Liberty Farms LLC – Beadle County

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

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

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

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

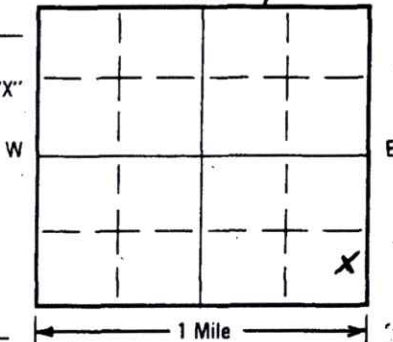
(south well)

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 5 Twp 103N Rg 55W
 County McCook North of 5th PM

Please mark well location with an "X"



Well Completion Date

1-9-98

1 Mile

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 1000 ft. from Pit (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>19.18</u> LB/FT	<u>6</u> IN	<u>0</u> FT	<u>200</u> FT	<u>10</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Wye Ben</u>	<u>22</u>	<u>200</u> lb./gal	<u>20</u> ft	<u>200</u> ft
<u>CMT Green</u>	_____	_____ lb./gal	<u>0</u> ft	<u>20</u> ft

Describe grouting procedure Pump w/drilling rig
1 bag x 24 gallons

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION: Was well disinfected upon completion?

☒ YES, How: 5 gals of chlorine
Pumped

_____ NO, Why Not? _____

Laboratory sent to for water quality analysis

Unknown

Well Owner: _____

Business Name: Farmers Federated PorkAddress: PO Box 5047Sioux Falls S. Dak 57117

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Soil</u>	<u>0</u>	<u>2</u>
<u>yellow clay</u>	<u>2</u>	<u>29</u>
<u>blue clay</u>	<u>29</u>	<u>147</u>
<u>Clay/mixed Sand</u>	<u>147</u>	<u>150</u>
<u>blue clay</u>	<u>150</u>	<u>198</u>
<u>Granite</u>	<u>198</u>	<u>308</u>

STATIC WATER LEVEL

90'

If flowing: closed in pressure _____

GPM flow _____ through _____

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____

Can well be completely shut in? _____

WELL TEST DATA:

☐ PumpedDescribe: Air☐ Bailed☐ Other _____

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

30 g.p.m.This well was drilled under license # 439

And this report is true and accurate.

Drilling firm Dave Patek well Drilling Inc

Signature of License Representative:

Dave Patek

Signature of Well Owner or Equitable Property Holder:

Farmers Federated Pork QJW

Date:

2-19-98

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8289-3

I have this day, August 19, 2024, made a thorough examination of the water use system constructed by Farmers Pork, c/o Barry Kerkaert, PO Box 188, Pipestone, MN 56164 of Permit No. 8289-3, bearing the priority of June 11, 2017 authorizing the diversion of 0.067 cu. ft. per second of the waters of the Sioux Quartzite Aquifer for commercial swine use purposes, in McCook County.

A. Works used to divert the water:

Well Information: *** (SEE SECTION F FOR MORE WELL INFO)

- 1) Well Drilling Firm: Putzke Well Drilling
- 2) No. of Wells 2 (North & South wells)
- 3) Depth(s) South - 308 & North - similar feet
- 4) Well log is available North - N & South - Y

Casing: South Well

- 1) Diameter 6 inches
- 2) Length 200 feet
- 3) Type Steel

Screen: South Well

- 1) Type NA
- 2) Length NA feet
- 3) Static water level 90 feet

Pump: Norther & South Wells

- 1) Make Submersible
- 2) Model Unknown
- 3) Size Unknown
- 4) Capacity North - 10 & South - 30 GPM

Motor:

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

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

- 1) Type Buried Plastic
- 2) Size Unknown inches
- 3) Length 200 feet

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by N

If no, describe: **Pumps capable of 0.089 cfs; permit for 0.067 cfs**

- 2) Exceptions to compliance are: None (wells are operated on rotation)

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: **WELL LOCATIONS**
From the SE corner Sec 5 T103N R55W "N" WELL: 1240 ft N & 290 ft W, Lat 43.74976 Long -
97.44995 (SE ¼ SE ¼) "S" WELL: 1150 ft N & 245 ft W, Lat 43.74944 Long -97.44990 (SE ¼ SE ¼)
2. The works are capable of diverting and conveying to the place of use 0.089 cu. ft. per second of water which is to be used for commercial swine production.
the license should be issued for 0.067 cfs.
3. All structures, wells and lands on map Y

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

There is another well on the property ("N" well on map). Could see a 4-inch PVC casing at soil surface but do not have any more information about the well.

The two (2) wells can pump 40 gpm together.

FSA maps and the ArcGIS program were used to construct the attached well location a map.

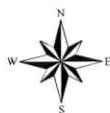
I contacted Mr. Marty Rost (507/215-0482) regarding the well discharge capacity and horsepower.

The address and phone number in the permit application materials are current.



Darrell DeBoer
Water Rights Inspector
DENR, Water Rights Program

Date report completed: August 20, 2024



0 385 770 1,540 2,310 3,080 Feet

Darrell DeBoer
Water Right Inspector
DANR-Water Rights Program

8289-3

Dewell, Amanda

From: Marty Rost <Marty.Rost@pipestone.com>
Sent: Monday, September 9, 2024 8:46 AM
To: Dewell, Amanda
Subject: RE: [EXT] Farmers Pork (West Site) 8289-3

I looked in our records for the second well completion log and can't come up with anything. It was drilled by Dave Putzke Well Drilling Inc. I spoke with him and he's going to look but doubts he'll have it since it was back in 1996-1998 when it was drilled. I'll forward anything I can find. He did mention that he knows it's in the granite and at approximately the same depth as the larger well.



Marty Rost
Environmental Management
Phone: 507-215-0482
Address: 1801 Forman Drive
Pipestone, MN 56164
marty.rost@pipestone.com

From: Marty Rost
Sent: Thursday, September 5, 2024 11:52 AM
To: Amanda.Dewell@state.sd.us
Subject: FW: Farmers Pork (West Site) 8289-3

Hello Amanda. I'll help you with this one too. The wells are used on a rotational basis. Metered electronically and reported annually. I will have to look in my office for a completion report for the 2nd well. I will get back to you Monday next week when I'm next in the office.



Marty Rost
Environmental Management
Phone: 507-215-0482
Address: 1801 Forman Drive
Pipestone, MN 56164
marty.rost@pipestone.com

From: Dr. Barry Kerkaert <Barry.Kerkaert@pipestone.com>
Sent: Thursday, September 5, 2024 11:37 AM
To: Marty Rost <Marty.Rost@pipestone.com>
Subject: FW: Farmers Pork (West Site) 8289-3

Marty

Please review and comment back to Amanda

Thanks
BK



Barry Kerkaert, DVM.

Chairman of the Board, Pipestone Holdings

Phone: 507-215-0471

Office: 507-825-4211

Address: 1300 S Hwy 75

Pipestone, MN 56164

barry.kerkaert@pipestone.com

From: Dewell, Amanda <Amanda.Dewell@state.sd.us>
Sent: Thursday, September 5, 2024 11:29 AM
To: Dr. Barry Kerkaert <Barry.Kerkaert@pipestone.com>
Subject: Farmers Pork (West Site) 8289-3

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- Pipestone IT Helpdesk

Mr. Kerkaert,

I am contacting you today regarding Water Permit No. 8289-3, held by Farmers Pork, authorizing the appropriation of 36.3 acre-feet annually (max. pump rate 0.067 cfs/30 GPM), from one well located in the SE ¼ SE ¼ Section 5, T103N, R55W, for commercial use in a swine confinement operation.

During an inspection conducted by one of our staff engineers, it was found that an additional 0.022 cfs/10G PM was being diverted from a second well located approximately 100 ft north of the well authorized under Permit No. 8289-3.

Are the wells used on a rotation, combined for a flow of 40 GPM to the facility, or one maintained as a backup? Additionally, there is no Well Completion Report on file for the smaller capacity (north) well. Do you have any records of its depth, screen and casing information, or who drilled it?

Please respond to this email at your earliest convenience. Thank you.

Amanda Dewell

DANR - Water Rights Program
Permitting Administrator
Main Phone: 605 773-3352
Website: danr.sd.gov

Approval of Location Change and/or Additional Diversion Point(s)NAME: Farmers Pork, c/o Barry KerkaertCOUNTY: McCookADDRESS: PO Box 188, Pipestone MN 56164DATE: September 9, 2024**GENERAL DESCRIPTION OF AUTHORIZED PROJECT:**

Water Permit No. 8289-3 authorizes the appropriation of 36.3 acre-feet of water annually with a maximum diversion rate of 0.067 cfs from one well Sioux Quartzite Aquifer (SOUX) located in the SE ¼ SE ¼ Section 5, T103N, R55W for commercial use in a swine livestock confinement facility.

AUTHORITY:

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

Developed water source same as permitted source and no additional water appropriated.

The un-permitted north well was completed to the same depth and within the same legal description as the existing well authorized by Permit No. 8289-3. The developed rate of diversion is 0.089 cfs, with 10 GPM being produced by the North Well and 30 GPM produced by the South Well. Conversation with the permit holder confirms that the wells are operated on rotation and not simultaneously and diversion at any given moment does not exceed the authorized 0.067 cfs.

If irrigation, no new land is irrigated.

Water Permit No. 8289-3 does not authorize any irrigation.

Review of Existing Diversions

The nearest permit authorized for diversion from the SOUX is approximately 0.4 miles north of the well in question (8290-3 also held by Farmers Pork). The next nearest permit/right appropriating from the SOUX would be 4271-3, held by the City of Spencer, located approximately 7.3 miles southwest. It was determined that there was reasonable probability any interference due to pumping from the original well would not adversely or unlawfully impair existing rights. The same would be expected for the north well.

The closest domestic well on file with the Water Rights Program of sufficient depth to be completed into the SOUX is located approximately 1.07 miles to the northwest located in the SE ¼ SW ¼ Section 32-T104N-R55W was drilled in 1977 to a depth of 800 feet, on property owned by Donald Huls, according to Regrid. While this is an area of complex geology, the geology provided on the well completion report is not consistent with this location, so it is possible the location listed by the driller for this well is incorrect.

The next closest domestic well on file, completed to a sufficient depth and geologic material consistent with the SOUX is located 1.12 miles to the south in the SE ¼ SE ¼ Section 8- T103N-R55W drilled in 2003 to a depth of 204 feet on property owned by Dorthy A Pulse, according to Regrid.

The location of the domestic wells in the well completion report database maintained by the Water Rights Program is based on the location listed by the driller on the well completion report.

Given the permit holder's owns wells located closer than the nearest domestic well or appropriative well (not belonging to the permit holder) completed into the SOUX, the permit holder would be incentivized to manage their pumping so as to not impact their own wells which would further reduce the potential for unlawful impairment to other users.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the additional "north" diversion point location be approved.



Amanda Dewell, Permitting Administrator
Water Rights Program

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

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



Eric Grönlund, Chief Engineer
Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 10 2024

8289-3

Farmers Pork
c/o Barry Kerkaert
PO Box 188
Pipestone MN 56164

Dear Mr. Kerkaert:

Enclosed is Water License No. 8289-3. 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

NOTES: *A priority date of June 11, 2017, was incorrectly listed on permit No. 8289-3. The priority date has been corrected to reflect a date of June 15, 2017, in the enclosed license.

Water Permit No. 8289-3 authorized one well with a pump rate of 0.067 cubic feet of water per second (30 gpm). The licensing investigation found two wells completed to supply the facility. The south well is capable of 30 gpm while the north well can supply 10 gpm for a total of 0.089 cfs (40 gpm). However, Farmers Pork's representative indicated the wells are used on a rotational basis and not at the same time. If the wells are used at the same time, the permitted diversion rate will be exceeded, and Farmers Pork will need to obtain a new permit for any increase above the authorized 0.067 cfs (30 gpm)

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8289-3

(1) Farmers Pork, PO Box 188, Pipestone MN 56164, made Application No. 8289-3, June 15, 2017, for a water permit to appropriate 36.3 acre-feet annually, with a maximum diversion rate of 0.067 cubic feet of water per second from groundwater, one well (Sioux Quartzite Aquifer), McCook County, South Dakota for commercial purposes in a swine livestock confinement operation. Permit No. 8289-3, with a priority date of June 15, 2017*, was approved September 11, 2017, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 11, 2022, and for the application to beneficial use of water on or before September 11, 2026.

An investigation conducted for licensing purposes found a second diversion point developed. Pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01, the Chief Engineer made a finding that the additional diversion point did not increase the potential for adverse effects to existing diversions.

(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 0.067 cubic feet of water per second for beneficial use. The locations of the diversion points are:

- North Well: 1,240 ft N & 290 ft W of the SE corner Section 5, T103N, R55W (SE ¼ SE ¼)
(Latitude 43.74976 & Longitude -97.44995)
- South Well: 1,150 ft N & 245 ft W of the SE corner Section 5, T103N, R55W (SE ¼ SE ¼)
(Latitude 43.74944 & Longitude -97.44990)

(3) The water is to be used during the following described annual period: January 1 – December 31.

(4) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(5) Pursuant to South Dakota Water Law 46-5-30.1 Farmers Pork, the holder and/or owner of Water Right No. 8289-3 is issued a license to appropriate water, the right to use 0.067 cubic feet of water per second from groundwater, two wells (Sioux Quartzite Aquifer), with a priority date of June 15, 2017*, from the locations specified in (2) of this license for commercial purposes in a swine livestock confinement operation.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8289-3 and subject to the following qualifications:

1. The well approved under Water Permit No. 8289-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these permits, shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights. *(The addition of a second well was approved during licensing of Water Right No. 8289-3, for which the same qualification applies.)*
2. Water Permit No. 8289-3 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

3. Water Permit No. 8289-3 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
4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Sioux Quartzite Aquifer.
5. Water Permit No. 8289-3 authorizes a total annual diversion of 36.3 acre-feet of water.

Eric Gronlund

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

SEP 10 2024

date

