

WATER PERMIT NO. 8068-3

Name of Applicant: **Thunder Ridge RE, LLC**

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

Amount of Water Claimed: **0.11 cfs** Total Acres: **NA**

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

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

Type of Waste Disposal System:

Location: **6 miles northwest of Marion**

PRIORITY Date Received: **12-15-14** Application/License Fee: **\$ 700**

Corrected Application Received: Period of Annual Use: **Jan 1 – Dec 31**

Remarks: **swine production facility**

Diversion Point: **N 1/2 NE 1/4 Sec 19-T100N-R55W**

Land to be Irrigated: **NA**

Depth of Well: **272 feet**

Well Driller: **Marion Well Drilling**

Remarks:

Type of Map: **plat**

Prepared by:

Reviewed and the Number Assigned on: **12-15-14**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

				⊗	⊗	

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8068-3</u>	(office use only) Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>	
	Newspaper <u>The New Era, Parker SD</u>	
	<u>Argus Leader</u>	

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DEC 15 2014

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 _____	

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 Thunder Ridge RE, LLC(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

Mailing Address PO Box 188 Pipestone MN 56164

(Address)

(City)

(State)

(Zip Code)

Home Phone 507-825-4211 Cell _____ Email lminion@pipevet.com2. Amount of water claimed 0.11 *CFS or 50 **GPM ***AF

(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply West Management Unit of the Upper Vermillion Missouri4. Location of point of diversion NE 1/4, Section 19, T100N, R55W (N 1/2 NE 1/4) County Turner

(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? _____

(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Turner6. Annual period during which water is to be used 12 months per year Jan 1 - Dec 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 new greenfield swine livestock production project includes one (1) 4,480 head deep pit gestation barn, one (1) 2,136 head shallow pit farrowing barn, one (1) deep pit gilt developer barn and one (1) compost barn. The project has received a Conditional Use Permit from Turner County and a CAFO permit from SD DENR.

I, Dr. Luke Minion, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

SOUTH DAKOTA
WATER PERMIT NO. 8068-3

Date of first receipt of application December 15, 2014.

Date of deferral by Water Management Board March 4, 2015.

The Water Management Board approved Water Permit No. 8068-3 on March 1, 2017 for Thunder Ridge RE, LLC, c/o Dr. Luke Minion, 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. 8068-3 appropriates 0.11 cubic feet of water per second from two wells (272 and 306 feet deep) to be completed into the Sioux Quartzite aquifer located in the N 1/2 NE 1/4 Section 19, T100N, R55W.
2. The water appropriated shall be used for commercial use in a swine confinement facility 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 from which applicant may claim right is December 15, 2014.
5. One-fifth of the construction is to be completed on or before September 1, 2019.
6. All construction is to be completed on or before March 1, 2022.
7. Water is to be put to beneficial use on or before March 1, 2026.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The wells approved under Water Permit No. 8068-3 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. Permit No. 8068-3 are 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. Permit No. 8068-3 are 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. 8068-3 authorize a total annual diversion of 46.0 acre feet of water.

WATER MANAGEMENT BOARD

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

MAR 08 2017
date



Supplemental Information

(type or print)

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

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

b) If existing wells, how many 2 Provide copy of log(s), if available. Drilled by Marion Well Driling

c) Well Depth 272' Depth to Top of Water Bearing Material 250' Depth to Water from Surface 183'

d) Distance to nearest existing domestic well:

On applicant's property None On property owned by others Unknow

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)

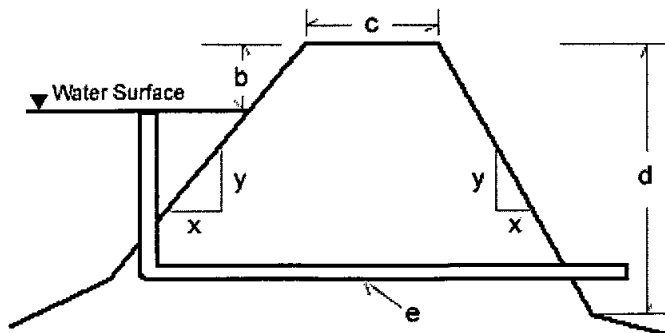
Upstream _____

Downstream _____

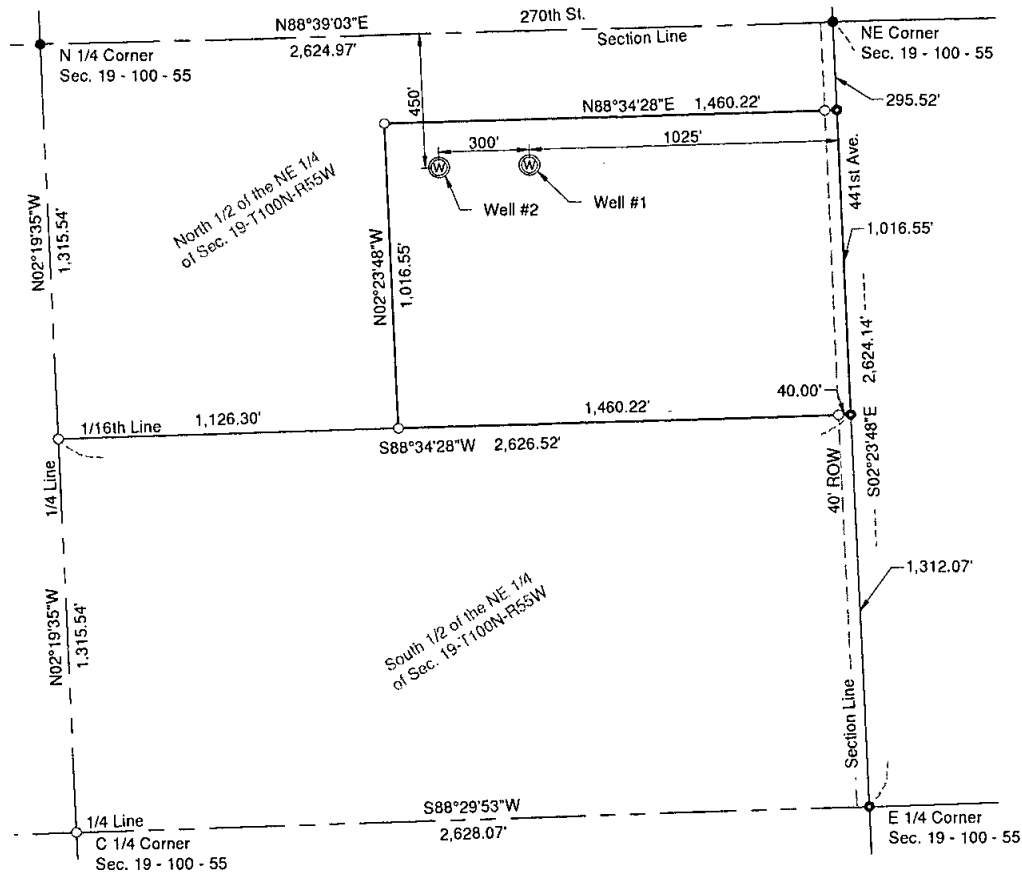
h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

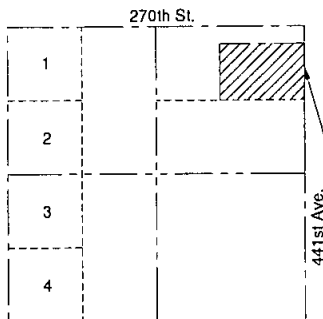
j) Drainage Area Above Dam _____ Acres



Thunder Ridge RE, LLC Water Rights Location Map

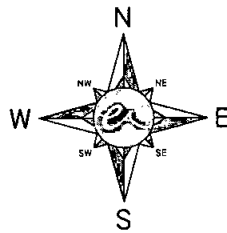


Section 19 - 100 - 55



Location Map
Not to Scale

S 1,016.4'
of the E 1,500'
of the N 1/2, NE 1/4



Basis of Bearing
Geodetic North

GRAPHIC SCALE



1 INCH = 400 FEET

Legend

- Found Monument as Noted
- ⊗ Calculated Corner
- Set 5/8" x 18" Rebar w/Cap Stamped "EISENBRAUN LS 3262"
- Set PK Nail

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JF# Y14208.S01
CC: Tim L. Gobel, L.S.
DWG: Brian Benson
CK BY: Todd Van Maanen

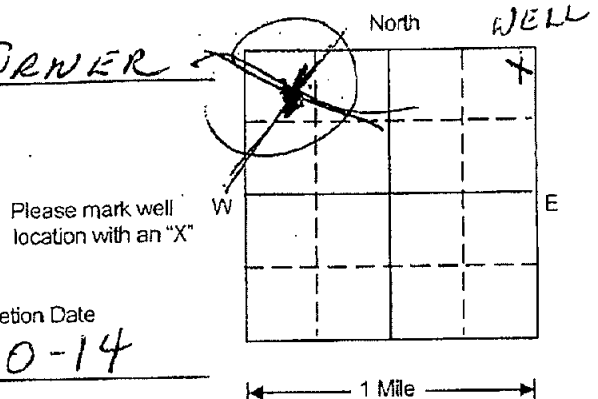
Prepared By
Eisenbraun & Associates
Professional Engineers & Surveyors
Innovative Solutions - Long Term Value
215 Walnut 605-665-8092
Yankton, South Dakota 57078 FAX 605-665-0523
www.eaweb.com

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 NE 1/4 Sec 19 Twp 100 Rg 55

County TURNER



Please mark well location with an "X"

Well completion Date
10-30-14

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

PROPOSED USE:
☒ Domestic/Stock ☐ Municipal ☐ Business ☐ Test Holes
☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring

METHOD OF DRILLING:
ST ROTARY

CASING DATA: ☐ Steel ☒ Plastic ☐ Other
If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>250 #</u>	<u>10</u> IN	<u>0</u> FT	<u>272</u> FT	<u>10</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:
Grout Type DE No. of Sacks 22 Grout Weight 5 Lb/gal 5 Ft 225 Ft
Describe grouting procedure Pump IN WITH ABOUT PUMP TREMIE LINE

SCREEN: ☒ Perforated pipe ☐ Manufactured
Diameter 5 Inches Length 20 Feet
Material PLASTIC
Slot Size 16 Set From 252 Feet to 272 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? CHLORINE

Lab sample sent to for water quality analysis ☐ No, Why Not?
CUSTOMER SENT SAMPLE IN

Please return WHITE COPY to: DENR Water Rights

Well Owner: _____

Business Name: THUNDER RIDGE

Address: _____

City, State, Zip: DARTON SD 57319

MARLENG PO BOX 370

WELL LOG: PIPSTONE MN 56164 DEPTH

FORMATION	FROM	TO
<u>Yellow CLAY</u>	<u>0</u>	<u>26</u>
<u>Blue CLAY</u>	<u>26</u>	<u>147</u>
<u>Fine SAND</u>	<u>147</u>	<u>156</u>
<u>Blue CLAY</u>	<u>166</u>	<u>225</u>
<u>SAND CLAY</u>	<u>225</u>	<u>250</u>
<u>HARD SAND</u>	<u>250</u>	<u>272</u>
<u>Rock Layer</u>	<u>272</u>	

STATIC WATER LEVEL 90' FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA: Pumped 24 HR

☒ Pumped Describe: _____

☐ Bailed _____

☐ Other _____

Pumping Level Below Land Surface

183 Ft. After 24 Hrs. pumped 30 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

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This well was drilled under license # 515

And this report is true and accurate.

Drilling firm: MARION WELL DRILLING

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 11-10-14

523 E Capitol Ave. Pierre SD 57501

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 12/15, 20 14

RECEIVED OF PVC Management PO Box 188 Pipestone MN 56164

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

Fee for Application for Permit No. <u>8068-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>8068-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	700 00

No. **07009**

By Jeanne Gosman
Chief Engineer

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WATER RIGHTS
PROGRAM

Eisenbraun & Associates
Professional Engineers & Surveyors

December 10, 2014

SD Water Right Program
c/o Eric Gronlund
Foss Building, 523 E. Capitol
Pierre, South Dakota 57501

RE: Thunder Ridge RE, LLC, Grant County, SD
E/A Project No. Y14208.D01

Dear Mr. Gronlund:

This letter and the attached documentation shall serve as the informational submittal for Thunder Ridge RE, LLC Water Rights permit application. The proposed operation will be located in the NE ¼, Section 19, T100N, R55W, Turner County, SD.

The Thunder Ridge RE, LLC project is swine production facility. The owner has obtained a conditional use permit from Turner County and a SD DENR CAFO Permit. The facility's water well usage is anticipated to be within the domestic usage range. A water rights permit is desired to protect their water source and potential management changes.

Included with the application is the well log from NE ¼, Section 19, T100N, R55W, Turner County, SD, a location map, and a check for the application fee. If you have any questions, please contact us.

Sincerely,
Eisenbraun & Associates, Inc.



Todd Van Maanen, PE
Project Engineer

Enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8068-3, Thunder Ridge RE, LLC**

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. 8068-3, Thunder Ridge RE, LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone MN 56164.

The Chief Engineer is recommending DEFERRAL of Application No. 8068-3 for one year in order to have a sufficient period of record in observation wells to determine if water levels have equilibrated in the Sioux Quartzite Wash in this area.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
February 6, 2015

NOTE: The application will be brought back before the Water Management Board at their March 2016 meeting. Thunder Ridge RE LLC may divert water for livestock watering without a water permit provided "reasonable domestic use" is not exceeded. Reasonable domestic use is the use of 25,920 gallons of water per day or less as necessary for domestic purposes, with a maximum pumping capacity of 25 gallons per minute.

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8068-3
THUNDER RIDGE RE, LLC.
JANUARY 3, 2015

Water Permit Application No. 8068-3 proposes to appropriate water at a maximum diversion rate of 0.11 cubic feet of water per second (cfs) from two wells to be completed into the Sioux Quartzite Wash aquifer. The wells are expected to be approximately 272 feet deep and will be located in the N½ NE¼ Sec. 19, T100N-R55W. Water is to be used for commercial use in a swine confinement facility.

AQUIFER: SIOUX QUARTZITE WASH (SXWS)

AREA GEOLOGY AND HYDROLOGY:

The “Source of water supply” was identified on this permit application as the “West Management Unit of the Upper Vermillion Missouri”. The name Upper Vermillion Missouri aquifer is a misnomer for a buried glacial outwash deposit that D. Holly first identified and termed the basal-outwash aquifer (as cited in Schulz, 1991, p. 3). Lindgren and Hansen (1990) mapped Holly’s basal-outwash aquifer as an extension of the Upper Vermillion-Missouri aquifer. The SD DENR-Water Rights Program conformed to the Lindgren and Hansen nomenclature and has considered the basal glacial outwash deposit in this area a part of the Upper Vermillion-Missouri aquifer. Recent evaluation of data suggests that the basal glacial outwash deposit in this area should be considered hydrologically distinct from the Upper Vermillion-Missouri: West aquifer (Buhler, 2014). For the purposes of this report, the basal glacial outwash deposit will be identified as the “Basal-outwash aquifer”.

The well sites proposed by this application overlie or nearly overlie the Basal-outwash aquifer as delineated by Schulz, (1991). This aquifer generally lies within a narrow, north-south trending, steeply sloped, bedrock valley in this area (see Figure 1).

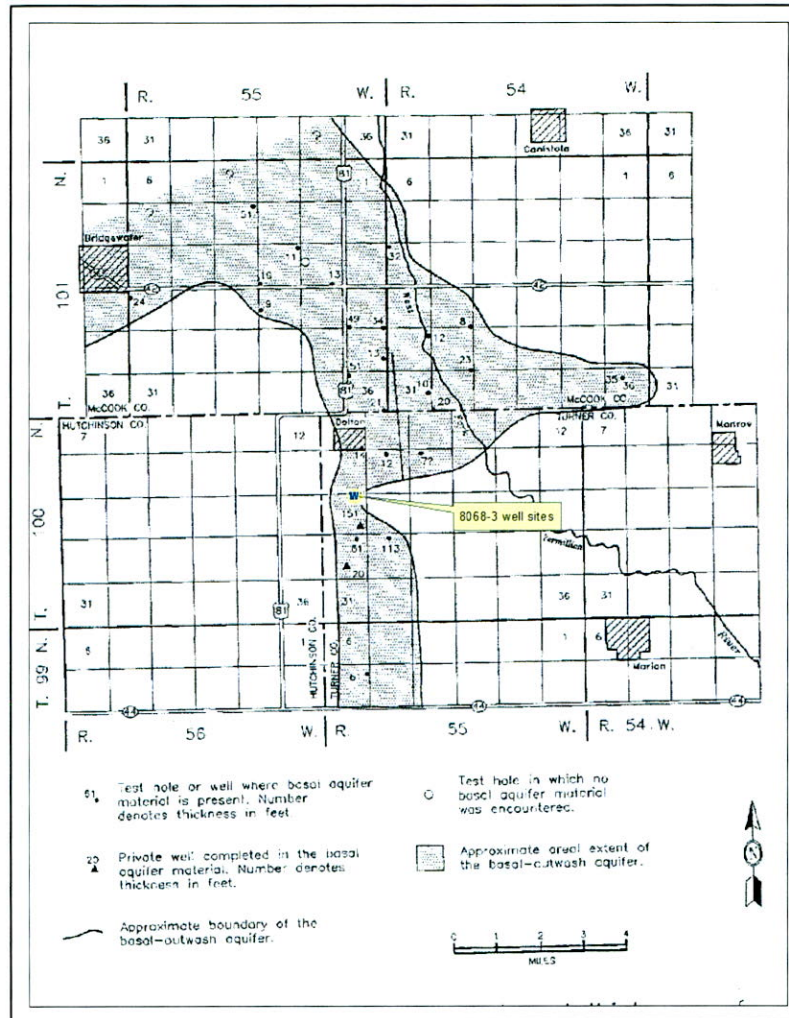


Figure 1. Approximate areal extent and thickness of the basal-outwash aquifer (modified from Schulz, 1991)

However, the completion report of a well that was constructed for this project identifies the source aquifer material, which is located at a depth of 250-272 feet below grade, as “Hard Sand”. Through subsequent discussions, the well driller indicated that the aquifer material was a “hard, white, cemented sand”, was “not gray gravel”, and was not “granite sand” (E.Schoenwald, personal communication, January 15, 2015). This aquifer material description is not consistent with a glacial outwash material and is more appropriate to bedrock.

The bedrock in this area consists of the Precambrian Sioux Quartzite, pre-Cretaceous (?) quartzite wash and Cretaceous sediments (Schulz, 1991). The three major bedrock aquifers identified in Hutchinson and Turner Counties are the Niobrara aquifer, the Codell aquifer and the Dakota aquifer (Lindgren and Hansen, 1990). Lindgren and Hansen (1990) also considered the Sioux Quartzite a minor aquifer in this area. Although they indicated the Sioux Quartzite Wash is permeable, attains a maximum thickness of 125 feet, and “Wells may yield as much as 250 gallons per minute”, Lindgren and Hansen (1990) did not recognize it as an aquifer.

Geologists have described the material they encountered overlying the basement Sioux Quartzite in this area in various ways. The geologist (Tomhave) for a test hole drilled approximately eight miles north-northwest of the well sites proposed by this application reported “Sand, Pink: Quartz-rich, cemented (Cretaceous undifferentiated)” overlying the basement rock. Eighty-seven feet of the Cretaceous aged Split Rock Creek Formation was identified, by the geologist (Schulz) in a test hole drilled approximately 4.4 miles north-northwest of the well sites proposed by Application No. 8068-3. Schulz also postulated that a test hole 2.7 miles northeast of this site encountered the Split Rock Creek Formation. The geologist (Holly) reported a sequence including “mudstone to sandstone; very fine sand, clayey...”, overlying a “Sandstone; fine to coarse sand, pinkish tint, moderate hardness...may contain several claystone layers, may be a thin coal seam at 354 feet... (Quartzite Wash?)” in Water Rights’ Observation Well MC-83H, which is located approximately 5 miles northeast of the sites proposed by Application No. 8068-3 (SD Geological Survey, 2015). It is not clear whether there is an actual diversity in the geology or simply in the geologists’ descriptions in this area.

A general depiction of the bedrock in this area is shown in Figure 2 (Tomhave and Schulz, 2004). Lacking an extreme density of test holes, detail is not available to accurately map the bedrock sequence identified as Cretaceous Undifferentiated in this area. In a general sense, the terms Sioux Quartzite Wash, Split Rock Creek and Cretaceous Undifferentiated may be synonymous (D.Iles, personal communication, January 20, 2015).

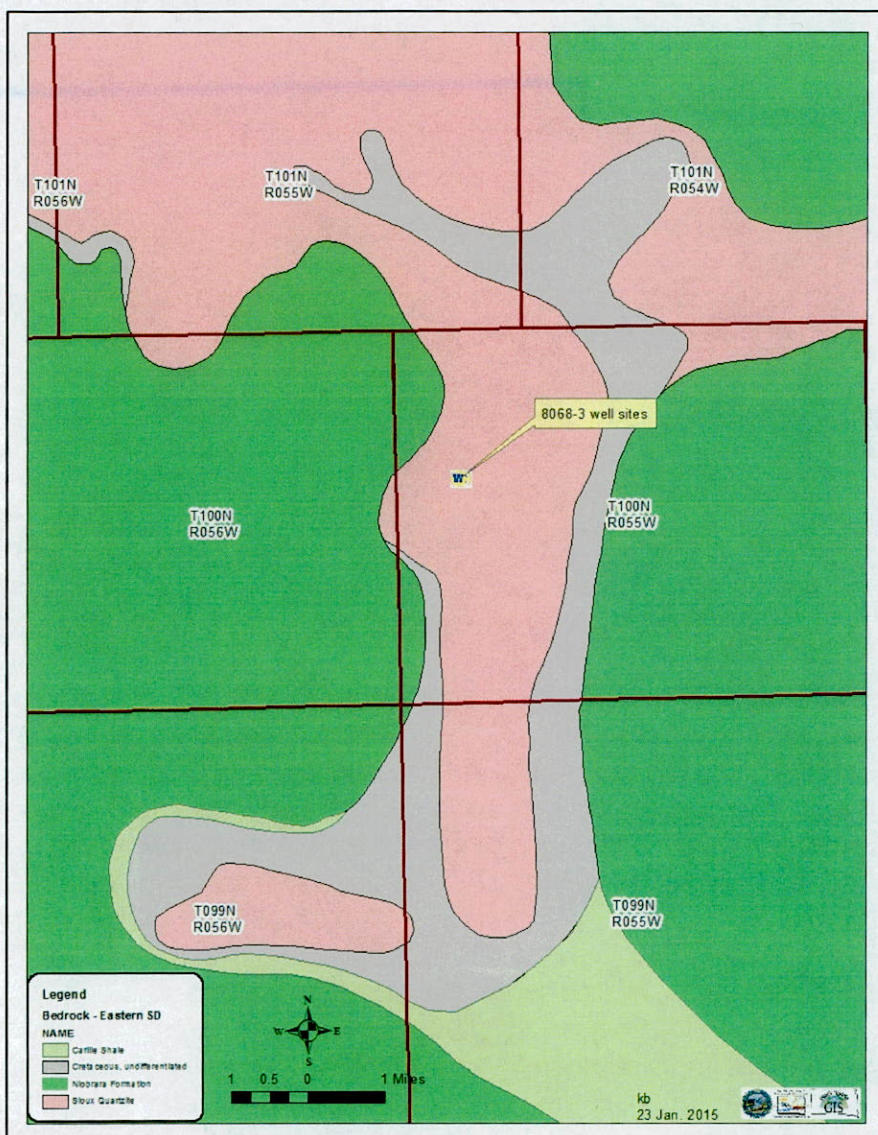


Figure 2. Bedrock geology in the vicinity of the well sites proposed by Water Permit Application No. 8068-3 (modified from Tomhave and Schulz, 2004)

The likely water source for the completed well that this application proposes to use is Undifferentiated Cretaceous/Sioux Quartzite Wash and will be referred to as the Sioux Quartzite Wash aquifer in this report. The areal extent of the aquifer has not been delineated, and it is not likely that the Sioux Quartzite Wash aquifer is a single contiguous unit. The Sioux Quartzite Wash aquifer is under confined conditions in this area and the static water level reported on the completion report submitted with this application was 90 feet below grade on October 30, 2014.

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 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.

WATER AVAILABILITY:

This application proposes to appropriate water from the Sioux Quartzite Wash aquifer at a rate of 0.11cfs. If this application is approved, average annual water use will likely be less than 80 acre-feet annually (ac-ft/yr). The probability that unappropriated water is available from the Sioux Quartzite Wash aquifer for this proposed appropriation can be evaluated by considering SDCL 46-6-3.1 which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source.” If the source of the water is older or lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, the aquifer may be older than or stratigraphically lower than the Greenhorn Formation, but the use would not be for a water distribution system, therefore the withdrawal/recharge issue must be considered.

In applying SDCL 46-6-3.1, the Sixth Judicial Circuit Court ruled in 2005 that if the Water Management Board uses average annual recharge, then it should also use average annual withdrawals to determine if unappropriated water is available from the aquifer (*Hines v. South Dakota Dept. of Environ. and Nat'l. Resources, Hughes County 04-37*) (Memorandum Decision, April 29, 2005).

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

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

Hydrologic Budget:

As stated above, it is not likely that the Sioux Quartzite Wash forms a single contiguous aquifer, and the areal extent of the Sioux Quartzite Wash aquifer has not been delineated in this area. Therefore, existing wells tapping the aquifer proposed by this application and their associated withdrawals cannot be quantified. In addition, the source of recharge to the Sioux Quartzite Wash aquifer has not been identified, and the recharge rate has not been quantified. Consequently, there is insufficient data to produce a hydrologic budget for the aquifer in this area.

Observation well data:

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

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

The DENR-Water Rights Program monitors two observation wells completed into the “Sioux Quartzite Wash” aquifer in this area. Observation well TU-83F is located approximately three miles east, and observation well MC-83H is located approximately four and three quarter miles northeast of the well sites proposed by this application. Hydrographs for these observation wells are shown in Figures 3 & 4.

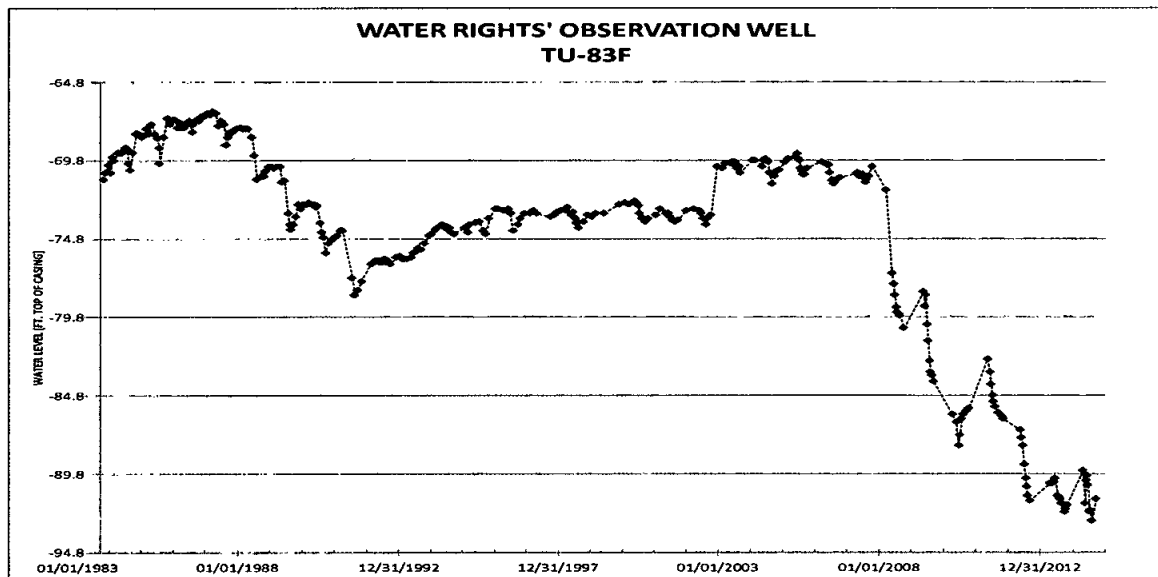


Figure 3. Hydrograph of an observation well completed into the Sioux Quartzite Wash aquifer located approximately three miles east of the well sites proposed by Application No. 8068-3 (Water Rights, 2015a).

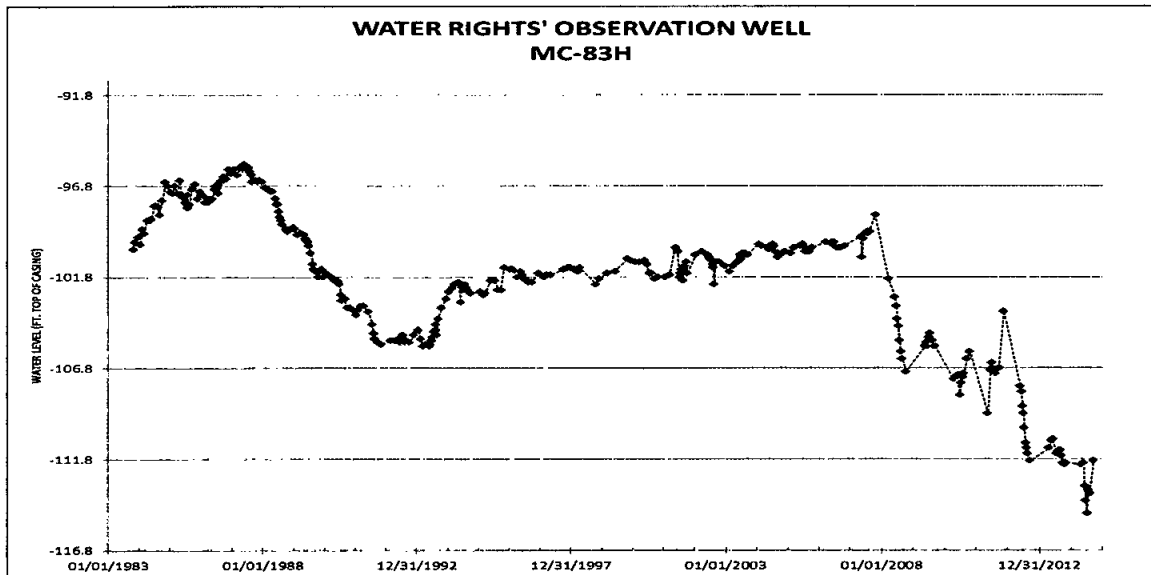


Figure 4. Hydrograph of an observation well completed into the Sioux Quartzite Wash aquifer located approximately four and three quarter miles northeast of the well sites proposed by Application No. 8068-3(Water Rights, 2015a).

Figures 3 and 4 document a decline of the potentiometric surface of the Sioux Quartzite Wash aquifer, measured at the observation wells, since October 2007. This decline has not been at a consistent rate as shown in Table 1.

Table 1. Rate of decline of the potentiometric surface at DENR-Water Rights Observation Wells TU-83F and MC-83F.

	Rate of decline per time period		
	Oct.2007-Oct. 2008	Oct.2008-Oct.2012	Oct.2012-Oct.2014
TU-83F	10.3 ft/yr	2.675 ft/yr	0.1ft/yr
MC-83F	8.6 ft/yr	1.225 ft/yr	0 ft/yr

As part of the evaluation of the hydrographs for the observation wells completed into the Sioux Quartzite Wash aquifer, they were compared to hydrographs from observation wells representative of other aquifers located within approximately 40 miles of the wells. Aquifers compared to the Sioux Quartzite Wash aquifer include the Basal-outwash (Basal), Niobrara (NBRR), Parker Centerville (PAC), Dolton (DOL), Upper Vermillion Missouri (UVM), Lower James Missouri (LJM), Vermillion East Fork (VEF), Vermillion West Fork (VWF), and Wall Lake (WAL) aquifers. Figure 5 shows hydrographs for these aquifers with water levels displayed in feet above mean sea level elevation.

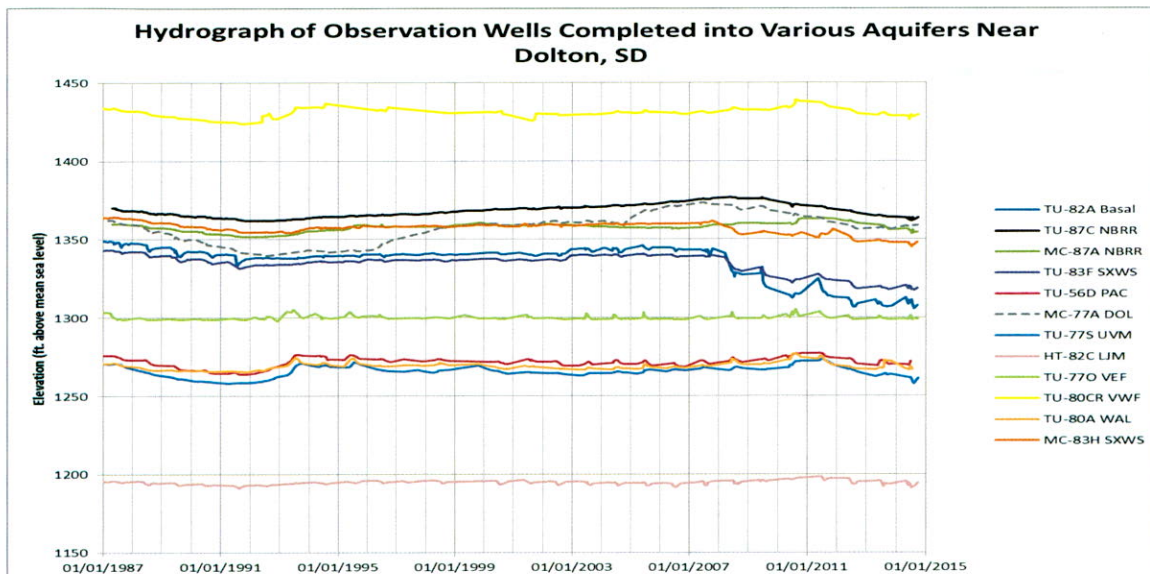


Figure 5. Composite graph showing representative hydrographs from area aquifers with water levels shown in feet above mean sea level (Water Rights, 2015a).

The mean sea level elevation of the data was eliminated by adding individual constants to each data set, allowing direct comparison of water level fluctuations as shown in Figure 6.

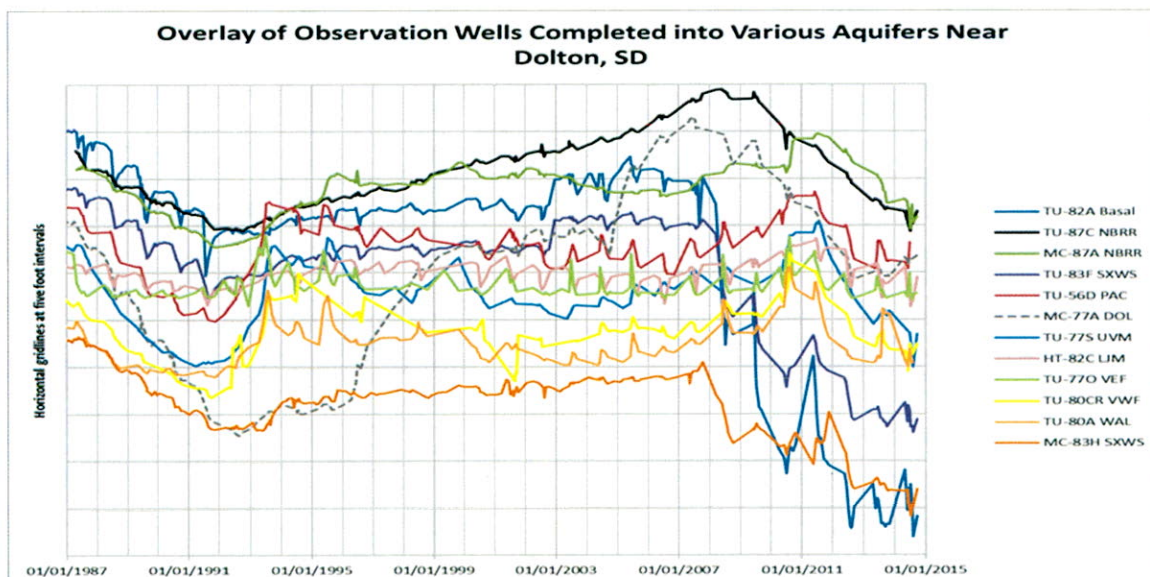


Figure 6. Composite graph showing representative hydrographs from area aquifers with mean sea level elevation eliminated to allow comparisons of water level fluctuations (Water Rights, 2015a).

Three distinct patterns are apparent in Figure 6: the hydrographs representing the Dolton aquifer and for an isolated portion of the Niobrara aquifer have similar trends which are very dissimilar to the others (Figures 6 & 7); the hydrographs for the other aquifers are similar until 2007; between 2007 and 2012, the hydrographs for the Basal-outwash and the Sioux Quartzite Wash aquifers document a decline that does not occur in the others (Figures 8 & 9).

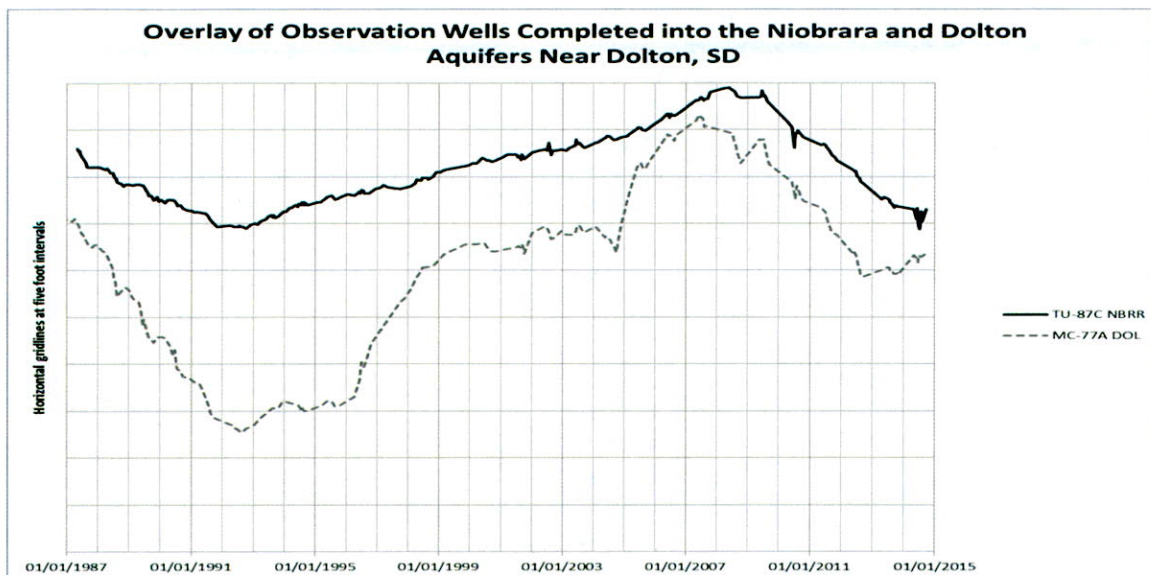


Figure 7. An overlay of hydrographs representing the Dolton aquifer and an isolated portion of the Niobrara aquifer for comparative purposes (Water Rights, 2015a).

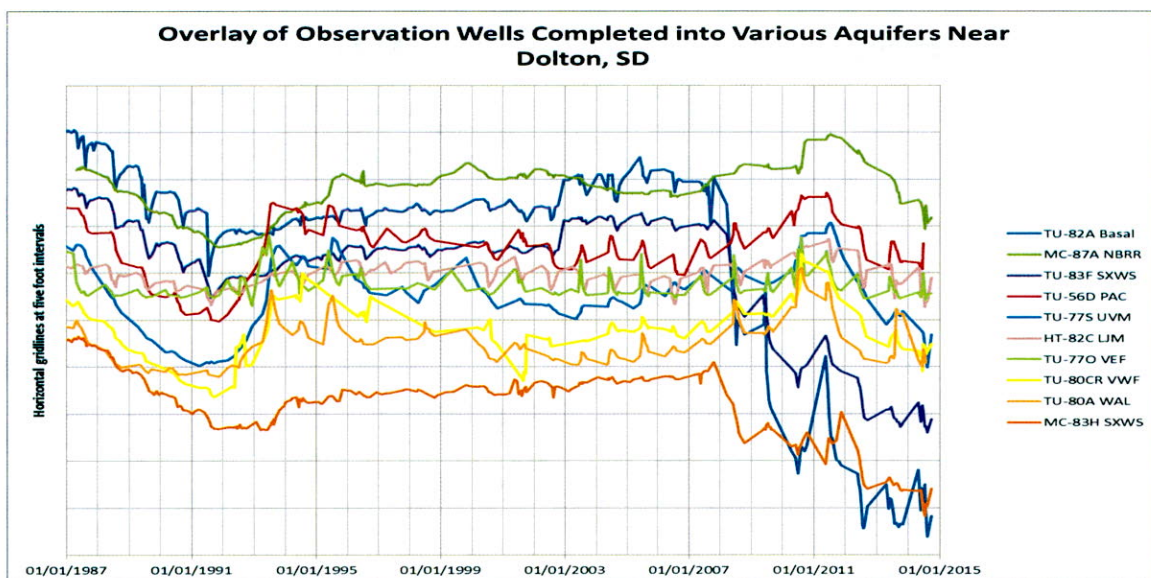


Figure 8. Composite graph showing representative hydrographs from area aquifers (minus the Dolton and an isolated portion of the Niobrara aquifer) with mean sea level elevation eliminated to allow comparisons of water level fluctuations (Water Rights, 2015a).

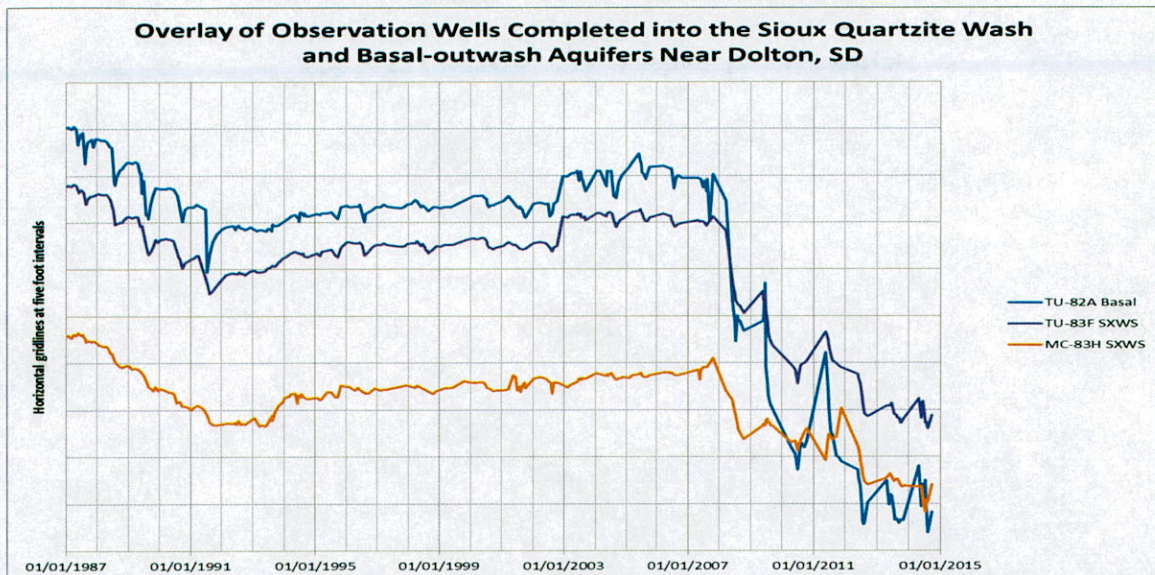


Figure 9. An overlay of hydrographs representing the Basal-outwash aquifer and the Sioux Quartzite Wash aquifers for comparative purposes.

The Basal-outwash and the Sioux Quartzite Wash aquifers appear to be responding to similar hydrologic conditions that are not affecting other aquifers in the area, and/or a hydrologic connection exists between the aquifers. The Sioux Quartzite Wash aquifer is essentially undeveloped in this area and should be under more or less under steady state conditions. However, recent development has occurred in the Basal-outwash aquifer. Well withdrawals from the Basal-outwash aquifer are primarily for appropriative uses. Water permits/rights appropriating water from the Basal-outwash aquifer are limited to rights/permits held by TM Rural Water District, and Todd M. and Merlyn Hofer (Water Right No. 4752-3). Historic water use from the Basal-Outwash aquifer is shown in Figure 10.

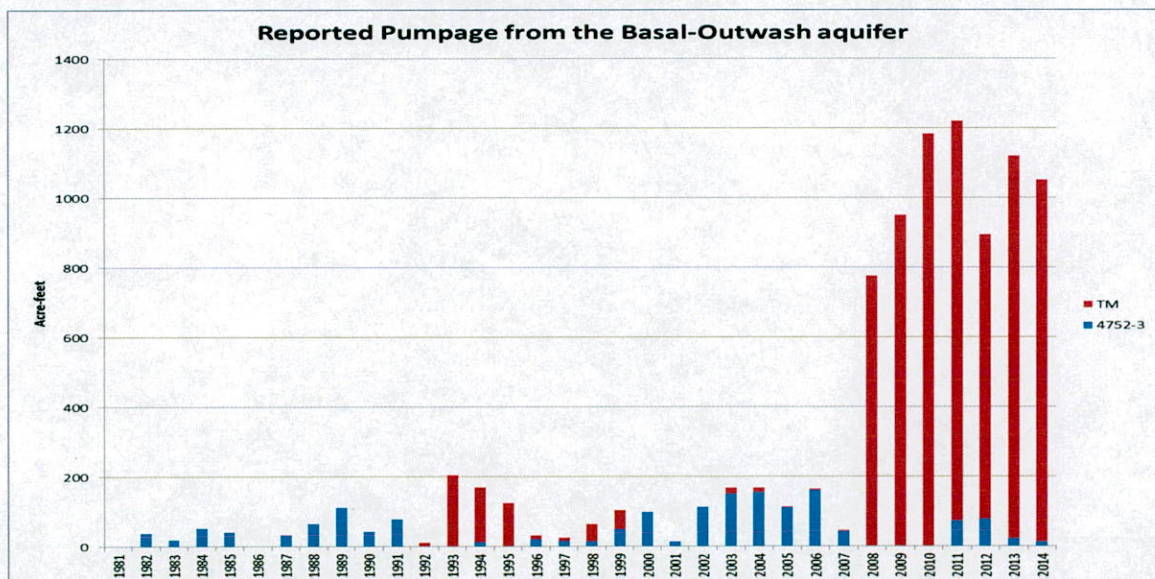


Figure 10. Pumpage reported from the Basal-Outwash aquifer (Water Rights, 1982-2014; and Water Rights, 1992-2015)

Well withdrawals from the Basal-outwash aquifer have increased from a 1981-2007 average annual withdrawal of 78 acre-feet/year to a 2008-2014 average annual withdrawal of 1,028 acre-feet/year (Water Rights, 1982-2014; and Water Rights, 1992-2015). The water level decline that occurred between October 2007 and October 2008 in the observation wells completed into the Basal-outwash aquifer is shown in Table 2.

Table 2. October 2007 through October 2008 decline of water level as measured in DENR-Water Rights' observation wells completed into the Basal-outwash aquifer.

Observation Well	Change in Water Level between October 2007 and October 2008 (feet)
TU-82A	-16.7
TU-90A	-12.1
TU-83A	-12.1
MC-83JR	-8.6
MC-83G	-8.7

The water level changes measured in these observation wells appear to coincide with pumping and the resulting drawdown from TM Rural Water District's two production wells.

The data used to generate Figure 8 was separated into three sections: pre-January 2007; January 2007 through January 2012; and post-January 2012. Overlays of area hydrographs for these time periods are shown in Figures 11-13.

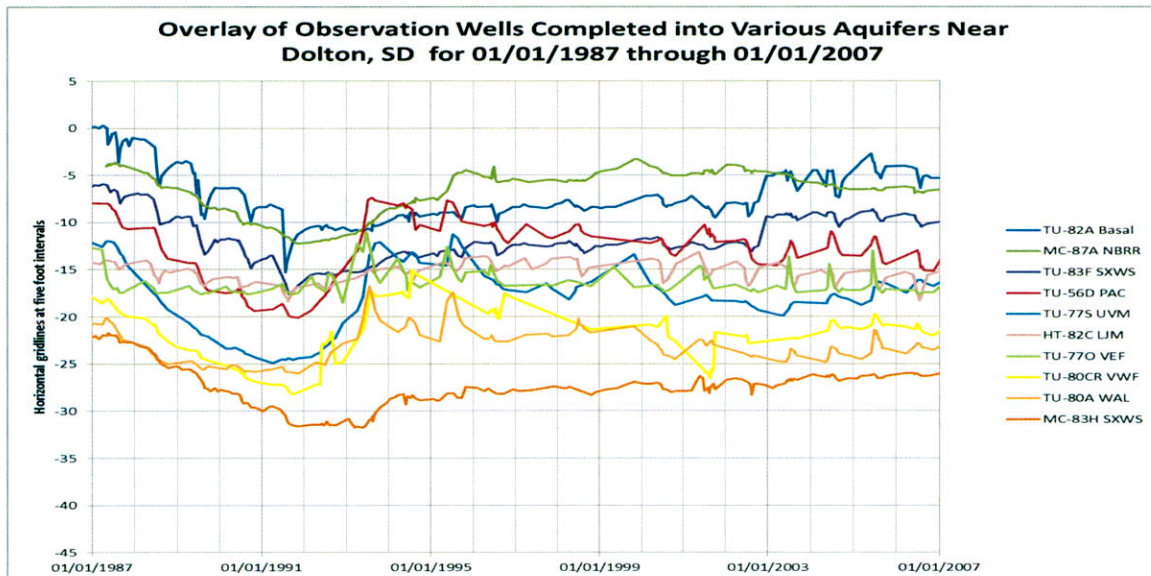


Figure 11. Composite graph showing representative hydrographs from area aquifers (minus the Dolton and an isolated portion of the Niobrara aquifer) from January 1, 1987 through January 1, 2007 with mean sea level elevation eliminated to allow comparisons of water level fluctuations (Water Rights, 2015a).

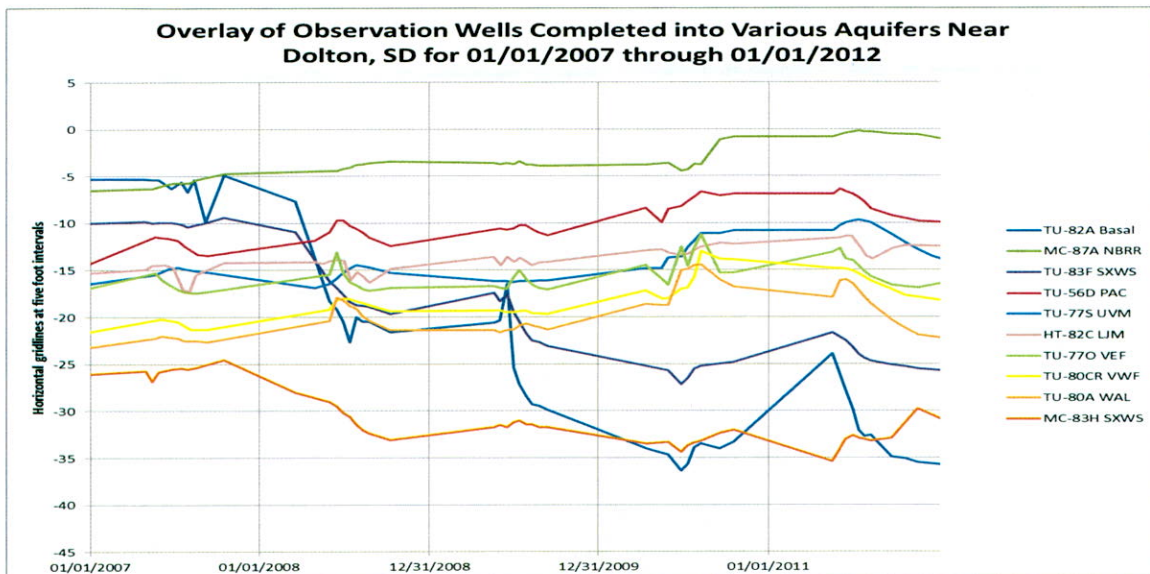


Figure 12. Composite graph showing representative hydrographs from area aquifers (minus the Dolton and an isolated portion of the Niobrara aquifer) from January 1, 2007 through January 1, 2012 with mean sea level elevation eliminated to allow comparisons of water level fluctuations (Water Rights, 2015a).

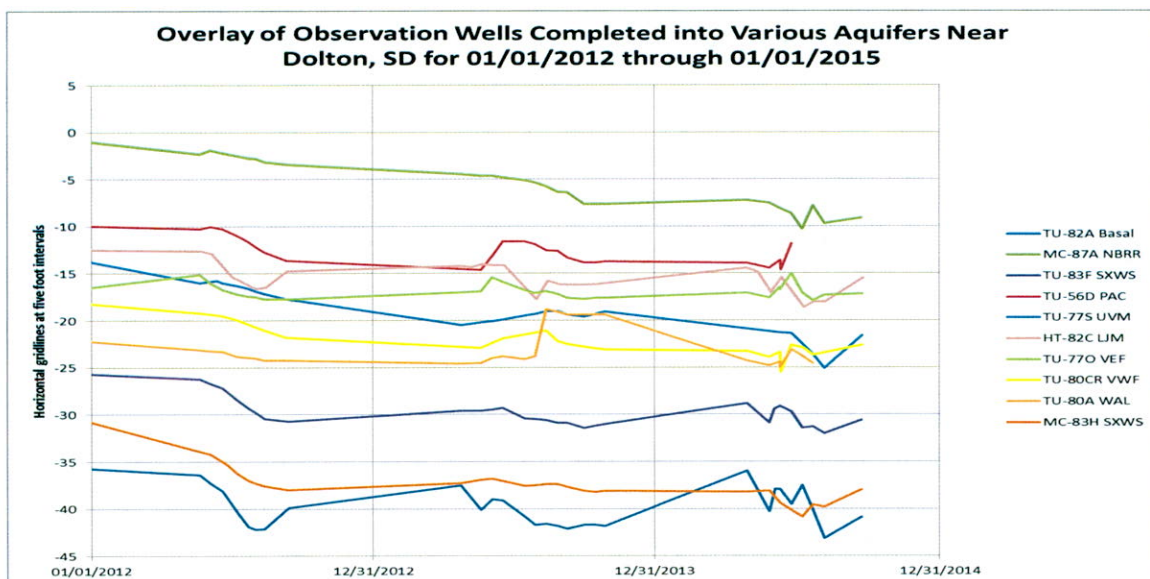


Figure 13. Composite graph showing representative hydrographs from area aquifers (minus the Dolton and an isolated portion of the Niobrara aquifer) from January 1, 2012 through January 1, 2015 with mean sea level elevation eliminated to allow comparisons of water level fluctuations (Water Rights, 2015a).

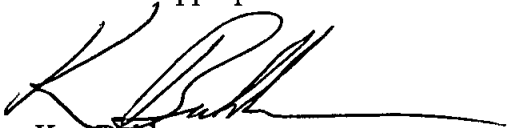
The hydrographs shown in Figure 11 show similar responses and climatic conditions appear to dominate the water level fluctuations of all of the aquifers from 1987-2007. The hydrographs in Figure 12, show the water levels of the Basal-outwash and Sioux Quartzite Wash aquifers

generally declined through 2008 and 2009 while the hydrographs for the other aquifers generally showed ascending water levels (presumably climatically dominated). Since 2012, the water level fluctuations of Basal-outwash and Sioux Quartzite Wash aquifers have appeared similar to the other aquifers in the area (presumably climatically controlled) (see Figure 13).

Continued pumping will usually expand the cone of depression in the aquifer until recharge areas are intercepted, causing the rate of water-level decline to be significantly reduced or stopped. It appears that additional recharge to the Basal-outwash aquifer has been induced from the Sioux Quartzite Wash aquifer and a new steady state has developed. However, the period of record is limited (2012-2014), and it may be premature at this point to state that recharge and withdrawals have equilibrated. There is not enough information available at this time to determine whether unappropriated water is available from the Sioux Quartzite Wash aquifer in this area.

CONCLUSIONS:

1. Water Permit Application No. 8068-3 proposes to appropriate water at a maximum diversion rate of 0.11 cfs from two wells to be completed into the Sioux Quartzite Wash aquifer.
2. Water levels in observation wells completed into the Sioux Quartzite Wash aquifer have declined significantly since 2007.
3. The Basal-outwash and the Sioux Quartzite Wash aquifers appear to be responding to similar hydrologic conditions that are not affecting other aquifers in the area, and/or a hydrologic connection exists between the aquifers.
4. The water level changes measured in these observation wells appear to coincide with pumping and the resulting drawdown from TM Rural Water District's two production wells.
5. Continued pumping will usually expand the cone of depression in the aquifer until recharge areas are intercepted, causing the rate of water-level decline to be significantly reduced or stopped.
6. It appears that additional recharge to the Basal-outwash aquifer has been induced from the Sioux Quartzite Wash aquifer and a new steady state may have developed.
7. A sufficiently long period of record is not available to determine if water levels have equilibrated in the Sioux Quartzite Wash aquifer in this area.
8. There is not enough information available at this time to determine whether unappropriated water is available from the Sioux Quartzite Wash aquifer in this area.



Ken Bühler
SD DENR-Water Rights Program

REFERENCES:

Banner Associates, Inc., 1992, Engineering Report Development of Water Supply Well No. 4 T-M Rural Water District: South Dakota Water Right No. 5608-3 file

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- Water Rights. 2015a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2015b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2015c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

RECEIVED
FEB 23 2015
WATER RIGHTS
PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF TURNER

I, Robin Schneider of the City of Parker, County of Turner, State of South Dakota being first duly sworn on oath, deposes and says: The New Era is a weekly legal newspaper of general circulation, printed and published in the City of Parker, in said County of Turner, by The New Era, New Century Press, publishers, and has been such legal newspaper during the times hereinafter mentioned; that the said newspaper 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 publication of the notice hereunto attached, and has during all of said time had, and now has, more than 200 bona fide subscribers; that the undersigned, The affiant, is the Office Manager of the said newspaper, in charge of the advertisement department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed:

#5978 Notice Of Hearing Application No. 8068-3 To Appropriate Water

_____ printed copy of hereto attached, is printed and published in the said newspaper for one successive weeks, one each week and on the same day of the week, on the following dates, to wit:

On Thursday, the 12th day of Feb. , 2015

That \$52.96 being the full amount of the fees for publication of the attached notices insures solely for the benefits of the publishers 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.

See attached

Robin Schneider
2014

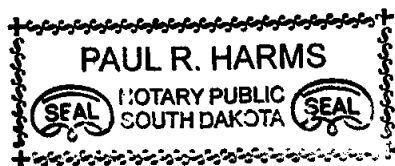
Subscribed and sworn to before me this _____

Day of February 2015
Paul R Harms

Notary Public, Turner County, South Dakota

My Commission Expires: March 20, 2018

Publication Fee \$
Notary Fees \$
Total \$52.96



**NOTICE OF HEARING On
Application No. 8068-3
To Appropriate Water**

Notice is given that Thunder Ridge RE, LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone, MN 56164 has filed an application for a water permit to appropriate 0.11 cubic feet of water per second from two wells to be completed into the Sioux Quartzite Wash Aquifer (272 feet deep) located in the N 1/2 NE 1/4 Section 19-T100N-R55W for commercial use in a swine confinement facility.

SDCL 46-2A-4(10) provides that "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 Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends DEFERRAL of Application No. 8068-3 for one year in order to have a sufficient period of record in observation wells to determine if water levels have equilibrated in the Sioux Quartzite Wash in this area.

The Water Management Board will consider this application at 10:00 a.m. on March 4, 2015 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to 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 Feb. 23, 2015. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of

the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The March 4, 2015 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by Feb. 23, 2015. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund by Feb. 23, 2015 at the above Chief Engineer's address to request copies of the staff report, recommendation, application or other information. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is Feb. 23, 2015. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-

15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25.02; 74:02:01:35.01.

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

Published once at the total approximate cost of \$52.96.

(#5978, 02/12/15, The New Era)

CUSTOMER NUMBER:	078200	Argus Leader	
AD ORDER NUMBER:	1456571		
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RECEIVED
FEB 17 2015
WATER RIGHTS PROGRAM

Thunder Ridge RE LLC
% Dr. Luke Minion
PO Box 188
Pipestone, MN 56164

1457419

DETACH THIS STUB AND RETURN WITH PAYMENT

PAYMENT DUE UPON RECEIPT

AFFIDAVIT OF PUBLICATION-

Customer Number: 078200
Invoice Number: 1456571

Argus Leader
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA } ss

Linda Schulte being duly sworn, says: That The Argus Leader is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-21, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

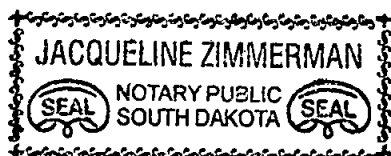
Thursday the 12 day of February 2015,
the day of 2015,
the day of 2015,
the day of 2015,
the day of 2015,
the day of 2015,
the day of 2015,

and that \$137.77Pd was charged for publishing the same

Linda Schulte
Subscribed and sworn to before me 2/12/2015

J. Zimmerman
Notary Public, South Dakota

My Commission expires December 22, 2015



NOTICE OF HEARING on Application No. 8068-3 to Appropriate Water

Notice is given that Thunder Ridge RE, LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone, MN 56164 has filed an application for a water permit to appropriate 0.11 cubic feet of water per second from two wells to be completed into the Sioux Quartzite Wash Aquifer (272 feet deep) located in the N 1/2 NE 1/4 Section 19-T100N-R55W for commercial use in a swine confinement facility.

SDCL 46-2A-4(10) provides that "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 Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends DEFERRAL of Application No. 8068-3 for one year in order to have a sufficient period of record in observation wells to determine if water levels have equilibrated in the Sioux Quartzite Wash in this area.

The Water Management Board will consider this application at 10:00 a.m. on March 4, 2015 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 23, 2015. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The March 4, 2015 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by February 23, 2015. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location. Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund by February 23, 2015 at the above Chief Engineer's address to request copies of the staff report, recommendation, application or other information. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352. Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is February 23, 2015. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

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Steven M. Pimer, Secretary, Department of Environment and Natural Resources. Published once at an approximate cost of \$137.77. 1457419 Feb. 12, 2015



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

February 5, 2015

New Era
PO Box 579
Parker SD 57053

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8068-3 to Appropriate Water. Please publish the notice once on February 12, 2015. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Thunder Ridge RE, LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone MN 56164 (Ph # 507-825-4211).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

February 5, 2015

Argus Leader
PO Box 5034
Sioux Falls SD 57117

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

February 5, 2015

Thunder Ridge RE LLC
Dr. Luke Minion
PO Box 188
Pipestone MN 56164

Dear Dr. Minion:

Water Permit Application No. 8068-3 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 New Era printed at Parker SD (Ph # 605-297-4419) and the Argus Leader printed at Sioux Falls SD (Ph # 605-331-2200). 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

c: Todd Van Maanen PE, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078

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 February 12, 2015. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF HEARING on Application No. 8068-3 to Appropriate Water

Notice is given that Thunder Ridge RE, LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone MN 56164 has filed an application for a water permit to appropriate 0.11 cubic feet of water per second from two wells to be completed into the Sioux Quartzite Wash Aquifer (272 feet deep) located in the N 1/2 NE 1/4 Section 19-T100N-R55W for commercial use in a swine confinement facility.

SDCL 46-2A-4(10) provides that "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 Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends DEFERRAL of Application No. 8068-3 for one year in order to have a sufficient period of record in observation wells to determine if water levels have equilibrated in the Sioux Quartzite Wash in this area.

The Water Management Board will consider this application at 10:00 a.m. on March 4, 2015 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 23, 2015. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The March 4, 2015 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by February 23, 2015. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund by February 23, 2015 at the above Chief Engineer's address to request copies of the staff report, recommendation, application or other information. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is February 23, 2015. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25.02; 74:02:01:35.01.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at an approximate cost of _____.

Gronlund, Eric

From: Gronlund, Eric
Sent: Tuesday, March 03, 2015 9:37 AM
To: lminion@pipevet.com; Todd VanMaanen (ToddV@eaweb.com)
Subject: Water Permit Application No. 8068-3, Thunder Ridge RE LLC
Attachments: March2015amended1.doc

Mr. Minion and Mr. VanMaanen

The water permit application for Thunder Ridge RE LLC is scheduled before the Water Management Board tomorrow, March 4th, at 10:00 AM. The permit proposes to appropriate water from the Sioux Quartzite Wash and the Chief Engineer recommended deferral for one year. Due to weather and travel considerations, a decision was made to conduct the meeting by telephone conference call. I thought I should let you know in the event that either of you planned to travel to Pierre to be present at the Board meeting. The attached amended agenda provides call in information if you want to participate by phone.

Please confirm receiving this email.

Eric Gronlund
Water Rights Program, DENR
605 773-3352
Eric.gronlund@state.sd.us



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 11, 2015

NOTICE

TO: Thunder Ridge RE LLC
Dr. Luke Minion
PO Box 188
Pipestone MN 56164

FROM: *for* Jeanne Goodman, Chief Engineer *Eric Gronlund*
Water Rights Program

SUBJECT: Deferral of Water Permit Application No. 8068-3, Thunder Ridge RE LLC

On March 4, 2015, the Water Management Board deferred consideration of Water Permit Application No. 8068-3. The application proposes to appropriate 0.11 cubic feet of water per second from two wells to be completed into the Sioux Quartzite Wash aquifer (272 feet deep) located in the N 1/2 NE 1/4 Section 19-T100N-R55W for commercial use in a swine confinement facility. Deferral of the application is for one year in order to have a sufficient period of record in observation wells to determine if water levels have equilibrated in the Sioux Quartzite Wash aquifer in this area.

Future notice will be provided when the application is scheduled to come back before the Board in March of 2016.

Please contact Eric Gronlund at (605) 773-3352 if you have questions about the deferral of the application.

c: Ann Mines-Bailey, Assistant Attorney General
Todd Van Maanen, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078

CERTIFICATION

I hereby certify that on March 11, 2015, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated March 11, 2015, regarding deferral of Water Permit Application No. 8068-3, Thunder Ridge RE LLC, as set forth below:

Thunder Ridge RE LLC
Dr. Luke Minion
PO Box 188
Pipestone MN 56164

Todd Van Maanen
Eisenbraun & Associates
215 Walnut
Yankton SD 57078

Sent Notice Inter-Office mail to:

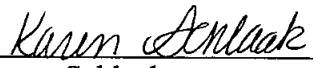
Ann Mines-Bailey, Assistant Attorney General, 1302 E. Hwy 14, Suite 1, Pierre SD 57501-8501



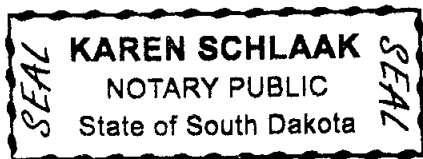
Gail Jacobson
Water Rights Program, DENR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 11th day of March, 2015



Karen Schlaak
Notary Public
My Commission expires April 1, 2019



Gronlund, Eric

From: Marty Rost <mrost@pipevet.com>
Sent: Friday, October 09, 2015 1:06 PM
To: Gronlund, Eric
Subject: Thunder Ridge, LLC september water usage
Attachments: Thunder ridge water tracking September 2015.xlsx

Marty Rost
Pipestone Veterinary Services
1300 South Highway 75
Pipestone, MN 56164
Office: 507.825.7029
Cell: 507.215.0482
mrost@pipevet.com
www.pipevet.com

PIPESTONE

Thunder Ridge, LLC Well Tracking Form

[illegible][illegible]

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
10/31/2015	407,500	
11/01/2015	414,800	7,300
11/02/2015	422,000	7,200
11/03/2015	429,300	7,300
11/04/2015	436,700	7,400
11/05/2015	444,500	7,800
11/06/2015	452,500	8,000
11/07/2015	460,400	7,900
11/08/2015	468,000	7,600
11/09/2015	476,300	8,300
11/10/2015	484,000	7,700
11/11/2015	489,000	5,000
11/12/2015	497,300	8,300
11/13/2015	502,300	5,000
11/14/2015	510,800	8,500
11/15/2015	517,100	6,300
11/16/2015	521,800	4,700
11/17/2015	527,700	5,900
11/18/2015	533,000	5,300
11/19/2015	542,100	9,100
11/20/2015	549,900	7,800
11/21/2015	556,800	6,900
11/22/2015	565,200	8,400
11/23/2015	571,900	6,700
11/24/2015	579,100	7,200
11/25/2015	588,200	9,100
11/26/2015	596,000	7,800
11/27/2015	603,100	7,100
11/28/2015	612,000	8,900
11/29/2015	617,700	5,700
11/30/2015	625,300	7,600
12/01/2015	633,100	

West Well		
Date	Reading	Use
10/31/2015	841,400	
11/01/2015	846,000	4,600
11/02/2015	851,600	5,600
11/03/2015	857,300	5,700
11/04/2015	863,000	5,700
11/05/2015	869,200	6,200
11/06/2015	875,400	6,200
11/07/2015	881,600	6,200
11/08/2015	887,600	6,000
11/09/2015	894,100	6,500
11/10/2015	901,900	7,800
11/11/2015	910,500	8,600
11/12/2015	916,900	6,400
11/13/2015	925,300	8,400
11/14/2015	931,900	6,600
11/15/2015	940,300	8,400
11/16/2015	948,800	8,500
11/17/2015	956,500	7,700
11/18/2015	965,100	8,600
11/19/2015	972,600	7,500
11/20/2015	984,800	12,200
11/21/2015	990,200	5,400
11/22/2015	999,200	9,000
11/23/2015	1,007,200	8,000
11/24/2015	1,014,800	7,600
11/25/2015	1,028,200	13,400
11/26/2015	1,037,100	8,900
11/27/2015	1,045,800	8,700
11/28/2015	1,055,400	9,600
11/29/2015	1,065,400	10,000
11/30/2015	1,071,300	5,900
12/01/2015	1,080,200	

Date	Use in Gallons
10/31/2015	0
11/01/2015	11,900
11/02/2015	12,800
11/03/2015	13,000
11/04/2015	13,100
11/05/2015	14,000
11/06/2015	14,200
11/07/2015	14,100
11/08/2015	13,600
11/09/2015	14,800
11/10/2015	15,500
11/11/2015	13,600
11/12/2015	14,700
11/13/2015	13,400
11/14/2015	15,100
11/15/2015	14,700
11/16/2015	13,200
11/17/2015	13,600
11/18/2015	13,900
11/19/2015	16,600
11/20/2015	20,000
11/21/2015	12,300
11/22/2015	17,400
11/23/2015	14,700
11/24/2015	14,800
11/25/2015	22,500
11/26/2015	16,700
11/27/2015	15,800
11/28/2015	18,500
11/29/2015	15,700
11/30/2015	13,500
12/01/2015	

Monthly Total 447,700

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
11/30/2015	625,300	
12/01/2015	633,100	7,800
12/02/2015	637,500	4,400
12/03/2015	642,100	4,600
12/04/2015	652,400	10,300
12/05/2015	658,000	5,600
12/06/2015	667,400	9,400
12/07/2015	678,400	11,000
12/08/2015	689,400	11,000
12/09/2015	698,400	9,000
12/10/2015	706,000	7,600
12/11/2015	715,100	9,100
12/12/2015	722,400	7,300
12/13/2015	729,600	7,200
12/14/2015	736,700	7,100
12/15/2015	744,100	7,400
12/16/2015	752,100	8,000
12/17/2015	758,300	6,200
12/18/2015	766,100	7,800
12/19/2015	775,500	9,400
12/20/2015	784,200	8,700
12/21/2015	792,400	8,200
12/22/2015	801,500	9,100
12/23/2015	807,300	5,800
12/24/2015	815,100	7,800
12/25/2015	822,200	7,100
12/26/2015	829,600	7,400
12/27/2015	837,600	8,000
12/28/2015	846,300	8,700
12/29/2015	853,500	7,200
12/30/2015	861,400	7,900
12/31/2015	870,800	9,400

West Well		
Date	Reading	Use
11/30/2015	1,071,300	
12/01/2015	1,080,200	8,900
12/02/2015	1,088,800	8,600
12/03/2015	1,097,200	8,400
12/04/2015	1,106,500	9,300
12/05/2015	1,116,700	10,200
12/06/2015	1,131,600	14,900
12/07/2015	1,138,400	6,800
12/08/2015	1,144,100	5,700
12/09/2015	1,152,400	8,300
12/10/2015	1,164,000	11,600
12/11/2015	1,177,500	13,500
12/12/2015	1,194,400	16,900
12/13/2015	1,210,400	16,000
12/14/2015	1,227,300	16,900
12/15/2015	1,242,600	15,300
12/16/2015	1,254,800	12,200
12/17/2015	1,266,300	11,500
12/18/2015	1,277,400	11,100
12/19/2015	1,288,600	11,200
12/20/2015	1,299,300	10,700
12/21/2015	1,310,100	10,800
12/22/2015	1,320,800	10,700
12/23/2015	1,329,800	9,000
12/24/2015	1,340,300	10,500
12/25/2015	1,350,600	10,300
12/26/2015	1,359,600	9,000
12/27/2015	1,366,900	7,300
12/28/2015	1,376,000	9,100
12/29/2015	1,385,200	9,200
12/30/2015	1,396,400	11,200
12/31/2015	1,406,800	10,400

Date	Use in Gallons
11/30/2015	0
12/01/2015	16,700
12/02/2015	13,000
12/03/2015	13,000
12/04/2015	19,600
12/05/2015	15,800
12/06/2015	24,300
12/07/2015	17,800
12/08/2015	16,700
12/09/2015	17,300
12/10/2015	19,200
12/11/2015	22,600
12/12/2015	24,200
12/13/2015	23,200
12/14/2015	24,000
12/15/2015	22,700
12/16/2015	20,200
12/17/2015	17,700
12/18/2015	18,900
12/19/2015	20,600
12/20/2015	19,400
12/21/2015	19,000
12/22/2015	19,800
12/23/2015	14,800
12/24/2015	18,300
12/25/2015	17,400
12/26/2015	16,400
12/27/2015	15,300
12/28/2015	17,800
12/29/2015	16,400
12/30/2015	19,100
12/31/2015	19,800
Monthly Total	561,200

RECEIVED
JAN - 5 2016
WATER RIGHTS
PROGRAM

Gronlund, Eric

From: Marty Rost <mrost@pipevet.com>
Sent: Tuesday, February 09, 2016 8:38 AM
To: Gronlund, Eric
Cc: Marty Rost; Sean Simpson
Subject: Thunder Ridge RE, LLC water well tracking January
Attachments: Thunder ridge water tracking January 2016.xlsx

Eric,
Attached is the water usage report for January. As you will see, we were over the limit on a few days toward the end of the month. We were charging the new farrowing pits, not something that is normal or done on a routine basis. Also, please note, that the average per day is under the allowable daily domestic use. We anticipate and will work to be under the 25,920 gallon mark.

Thanks.

Marty Rost
Pipestone Veterinary Services
1300 South Highway 75
Pipestone, MN 56164
Office: 507.825.7029
Cell: 507.215.0482
mrost@pipevet.com
www.pipevet.com

PIPESTONE

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
12/31/2015	870,800	
01/01/2016	876,500	5,700
01/02/2016	884,300	7,800
01/03/2016	890,400	6,100
01/04/2016	897,500	7,100
01/05/2016	904,900	7,400
01/06/2016	913,300	8,400
01/07/2016	926,800	13,500
01/08/2016	941,700	14,900
01/09/2016	950,200	8,500
01/10/2016	958,500	8,300
01/11/2016	973,200	14,700
01/12/2016	984,400	11,200
01/13/2016	994,600	10,200
01/14/2016	1,004,300	9,700
01/15/2016	1,014,500	10,200
01/16/2016	1,024,800	10,300
01/17/2016	1,034,700	9,900
01/18/2016	1,043,200	8,500
01/19/2016	1,058,900	15,700
01/20/2016	1,070,900	12,000
01/21/2016	1,082,400	11,500
01/22/2016	1,092,300	9,900
01/23/2016	1,104,500	12,200
01/24/2016	1,115,300	10,800
01/25/2016	1,127,800	12,500
01/26/2016	1,137,800	10,000
01/27/2016	1,150,800	13,000
01/28/2016	1,159,800	9,000
01/29/2016	1,170,500	10,700
01/30/2016	1,183,400	12,900
01/31/2016	1,187,200	3,800

West Well		
Date	Reading	Use
12/31/2015	1,406,800	
01/01/2016	1,416,100	9,300
01/02/2016	1,429,400	13,300
01/03/2016	1,438,400	9,000
01/04/2016	1,447,100	8,700
01/05/2016	1,456,200	9,100
01/06/2016	1,469,300	13,100
01/07/2016	1,480,600	11,300
01/08/2016	1,490,300	9,700
01/09/2016	1,506,400	16,100
01/10/2016	1,522,600	16,200
01/11/2016	1,532,800	10,200
01/12/2016	1,546,300	13,500
01/13/2016	1,561,000	14,700
01/14/2016	1,575,100	14,100
01/15/2016	1,588,800	13,700
01/16/2016	1,603,200	14,400
01/17/2016	1,618,200	15,000
01/18/2016	1,633,900	15,700
01/19/2016	1,648,500	14,600
01/20/2016	1,673,800	25,300
01/21/2016	1,697,600	23,800
01/22/2016	1,716,700	19,100
01/23/2016	1,735,600	18,900
01/24/2016	1,752,400	16,800
01/25/2016	1,774,300	21,900
01/26/2016	1,799,700	25,400
01/27/2016	1,820,000	20,300
01/28/2016	1,837,800	17,800
01/29/2016	1,855,100	17,300
01/30/2016	1,869,400	14,300
01/31/2016	1,891,200	21,800

Date	Use in Gallons
12/31/2015	0
01/01/2016	15,000
01/02/2016	21,100
01/03/2016	15,100
01/04/2016	15,800
01/05/2016	16,500
01/06/2016	21,500
01/07/2016	24,800
01/08/2016	24,600
01/09/2016	24,600
01/10/2016	24,500
01/11/2016	24,900
01/12/2016	24,700
01/13/2016	24,900
01/14/2016	23,800
01/15/2016	23,900
01/16/2016	24,700
01/17/2016	24,900
01/18/2016	24,200
01/19/2016	30,300
01/20/2016	37,300
01/21/2016	35,300
01/22/2016	29,000
01/23/2016	31,100
01/24/2016	27,600
01/25/2016	34,400
01/26/2016	35,400
01/27/2016	33,300
01/28/2016	26,800
01/29/2016	28,000
01/30/2016	27,200
01/31/2016	25,600
Monthly Total	800,800

SOUTH DAKOTA WATER WELL COMPLETION REPORT

8068-3

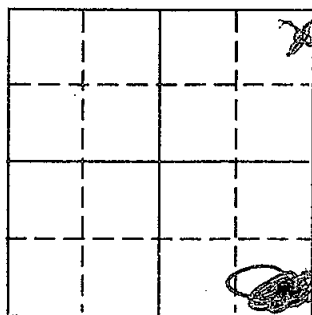
11-02

Location NE 1/4 NE 1/4 Sec 19 Twp 100 Rg 55

County

TURNER

North



Please mark well location with an "X"

Well completion Date

9-16-15

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? 200 ft. from MANURE PIT (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

ROTARY

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe 200' PLASTIC

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	5 IN	0 FT	286 FT	10 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type AE No. of Sacks 30 Grout Weight 5 Lb/gal From 5 Ft To 345 Ft

Describe grouting procedure PRESSURE GROUTING

SCREEN:

☒ Perforated pipe ☐ Manufactured
 Diameter 5 Inches Length 20 Feet
 Material PLASTIC
 Slot Size 16 Set From 286 Feet to 306 Feet
 Other information BOTTOM OPEN

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? CHLORINE

☐ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner:

Business Name:

Address:

City, State, Zip:

THUNDER RIDGE
27025 441 Ave
DOLTON S.D 57819

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>TOP SOIL</u>	<u>0</u>	<u>3</u>
<u>Yellow Clay</u>	<u>3</u>	<u>17</u>
<u>Blue Clay</u>	<u>17</u>	<u>62</u>
<u>Rock Layer</u>	<u>62</u>	<u>65</u>
<u>Blue Clay</u>	<u>65</u>	<u>102</u>
<u>SANDSTONE</u>	<u>102</u>	<u>125</u>
<u>Blue Clay</u>	<u>125</u>	<u>161</u>
<u>MUDY SAND</u>	<u>161</u>	<u>187</u>
<u>Blue Clay</u>	<u>187</u>	<u>265</u>

STATIC WATER LEVEL

105 FEET 265 FEET

If flowing: closed in pressure

GPM flow 306 through 1" pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate 306 GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: 306
☐ Bailed
☐ Other

Pumping Level Below Land Surface

183 Ft. After 24 Hrs. pumped 30 GPM

Ft. After 24 Hrs. pumped 30 GPM

If pump installed, pump rate: 306 GPM

REMARKS MAILING ADDRESS

PO. Box 370
PIPESTONE, MN 56164

This well was drilled under license # 515

And this report is true and accurate.

Drilling firm: MARTON Well Drilling

Signature of License Representative: [Signature]

Signature of Well Owner or Equitable Property Holder: [Signature]

RECEIVED

OCT 08 2015

Date:

523 E Capitol Ave. Pierre SD 57501

WATER RIGHTS PROGRAM

Please return WHITE COPY to: DENR Water Rights

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
01/31/2016	1,187,200	
02/01/2016	1,193,800	6,600
02/02/2016	1,203,400	9,600
02/03/2016	1,215,000	11,600
02/04/2016	1,227,400	12,400
02/05/2016	1,238,000	10,600
02/06/2016	1,248,300	10,300
02/07/2016	1,257,700	9,400
02/08/2016	1,268,300	10,600
02/09/2016	1,278,400	10,100
02/10/2016	1,289,100	10,700
02/11/2016	1,300,300	11,200
02/12/2016	1,311,300	11,000
02/13/2016	1,323,600	12,300
02/14/2016	1,330,400	6,800
02/15/2016	1,341,700	11,300
02/16/2016	1,350,800	9,100
02/17/2016	1,360,400	9,600
02/18/2016	1,371,600	11,200
02/19/2016	1,382,000	10,400
02/20/2016	1,393,400	11,400
02/21/2016	1,404,200	10,800
02/22/2016	1,412,800	8,600
02/23/2016	1,424,600	11,800
02/24/2016	1,444,200	19,600
02/25/2016	1,455,400	11,200
02/26/2016	1,465,300	9,900
02/27/2016	1,475,400	10,100
02/28/2016	1,485,600	10,200
02/29/2016	1,495,500	9,900
03/01/2016	1,509,400	13,900
03/02/2016		-1,509,400

West Well		
Date	Reading	Use
01/31/2016	1,891,200	
02/01/2016	1,907,100	15,900
02/02/2016	1,921,100	14,000
02/03/2016	1,937,000	15,900
02/04/2016	1,950,400	13,400
02/05/2016	1,966,700	16,300
02/06/2016	1,983,300	16,600
02/07/2016	1,998,600	15,300
02/08/2016	2,012,700	14,100
02/09/2016	2,027,500	14,800
02/10/2016	2,042,300	14,800
02/11/2016	2,056,700	14,400
02/12/2016	2,071,400	14,700
02/13/2016	2,085,100	13,700
02/14/2016	2,103,500	18,400
02/15/2016	2,118,900	15,400
02/16/2016	2,134,800	15,900
02/17/2016	2,150,600	15,800
02/18/2016	2,165,700	15,100
02/19/2016	2,181,300	15,600
02/20/2016	2,197,500	16,200
02/21/2016	2,213,800	16,300
02/22/2016	2,232,400	18,600
02/23/2016	2,247,000	14,600
02/24/2016	2,275,000	28,000
02/25/2016	2,290,500	15,500
02/26/2016	2,304,200	13,700
02/27/2016	2,319,400	15,200
02/28/2016	2,336,000	16,600
02/29/2016	2,349,800	13,800
03/01/2016	2,361,400	11,600
03/02/2016		-2,361,400

Date	Use in Gallons
01/31/2016	0
02/01/2016	22,500
02/02/2016	23,600
02/03/2016	27,500
02/04/2016	25,800
02/05/2016	26,900
02/06/2016	26,900
02/07/2016	24,700
02/08/2016	24,700
02/09/2016	24,900
02/10/2016	25,500
02/11/2016	25,600
02/12/2016	25,700
02/13/2016	26,000
02/14/2016	25,200
02/15/2016	26,700
02/16/2016	25,000
02/17/2016	25,400
02/18/2016	26,300
02/19/2016	26,000
02/20/2016	27,600
02/21/2016	27,100
02/22/2016	27,200
02/23/2016	26,400
02/24/2016	47,600
02/25/2016	26,700
02/26/2016	23,600
02/27/2016	25,300
02/28/2016	26,800
02/29/2016	23,700
03/01/2016	25,500
03/02/2016	-3,870,800
Monthly Total	792,400



8068-3

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 3, 2016

NOTICE AND ORDER

TO: Marty Rost
Pipestone Veterinary Services
1300 South Highway 75
Pipestone, MN 56164

FROM: Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Order to limit the use of ground water by Thunder Ridge RE, LLC, to reasonable domestic use

Pursuant to SDCL 46-2-18 this notice is an order to immediately limit the use of ground water to reasonable domestic use at the Thunder Ridge RE, LLC, concentrated swine feeding operation in the NE1/4 Section 19, T100N, R55W in Turner County.

At the March 2015 Water Management Board meeting, your application for the appropriation of water at this location for the commercial use in a swine confinement facility was deferred pending further analysis of the observation wells located in the Sioux Quartzite Wash Aquifer. In adopting the Chief Engineer's recommendation to defer the application, Thunder Ridge RE LLC was informed that it could divert water for livestock watering without a permit provided that "reasonable domestic use" was not exceeded and that such use was defined as "the use of 25,920 gallons of water per day or less as necessary for domestic purposes, with a maximum pumping capacity of 25 gallons per minute."

You submitted the January water usage report for Thunder Ridge via e-mail on February 9, 2016, to Eric Gronlund with DENR's Water Rights Program. The report indicates daily use of water at Thunder Ridge exceeded reasonable domestic use (daily use of 25,920 gallons or average of 18 gallons per minute) for 12 days in January 2016. In the e-mail, you indicate water usage over the reasonable domestic use limit was due to charging the new farrowing pits, which is not a normal or routine use of the water. However, you state you will work to be under the limit.

Exceeding the daily use of water at the Thunder Ridge facility is unlawful and must not continue until a water permit is in place. Overusing water at the facility without a valid

water permit is a violation of South Dakota's water law and is subject to penalties of up to \$500 per day per violation. The Water Rights Program will continue to review the water use reports submitted by Pipestone Veterinary Services to monitor the daily water use at the facility, and if reasonable domestic use is exceeded, DENR will take further action to include penalties. If you have any questions, please contact Eric Gronlund at (605) 773-3352.

cc: Sean R. Simpson, Vice President and General Counsel
1300 S. Highway 75
Pipestone MN 56164

CERTIFICATION

I hereby certify that on March 3, 2016, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelope(s) containing a Notice dated March 3, 2016 regarding Order to limit use of Groundwater addressed as stated below:

Marty Rost, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164

Sean R Simpson, Vice President & General Counsel, 1300 S Hwy 75, Pipestone MN 56164

Garl Jackson

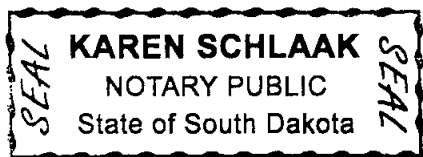
Gail Jacobsen
Secretary/Water Rights

[illegible]

Sworn to, before me, this 3rd day of March, 2016.

Karin Ahlback

Karen Schlaak
Notary Public
My Commission expires April 1, 2019





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

April 19, 2016

NOTICE

TO: Dr. Luke Minion
Thunder Ridge RE LLC
PO Box 188
Pipestone MN 56164

FROM: Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Water Permit Application No. 8068-3, Thunder Ridge RE LLC

Water Permit Application No. 8068-3 proposes to appropriate 0.11 cubic feet of water per second from two wells to be completed into the Sioux Quartzite Wash aquifer (272 feet deep) located in the N 1/2 NE 1/4 Section 19-T100N-R55W for commercial use in a swine confinement facility in Turner County, South Dakota. On March 4, 2015, the Water Management Board deferred consideration of Water Permit Application No. 8068-3 for one year in order to obtain additional observation well water level records for the aquifer.

The Water Rights Program's review of the application and observation well records in preparation to schedule the application back for Board consideration led to question whether the water source is correctly identified as the Sioux Quartzite Wash aquifer. To evaluate the criteria in state law for when a permit application can be issued, it is imperative to correctly identify the source. The well site is in a location of complex geology, and since the South Dakota Geological Survey is already scheduled to drill test holes near the area this spring or early summer, the Chief Engineer recommends continued deferral of the application until the water source can be definitively determined. It will be recommended the application remain deferred until the Geological Survey work is completed and the application is further evaluated.

Since the one year period has past, the application will be brought back before the Board for an update. Specifically, the recommendation to the Water Management Board will be to continue deferral until additional test holes are drilled and the information evaluated. The deferral will be for no longer than March 2017.

The Water Management Board will consider deferred Application No. 8068-3 at 10:00 AM (Central Daylight Time) on Thursday, May 5, 2016, in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre SD. The agenda time is an estimate.

Applicable provisions of the public notice published February 12, 2015, in The New Era and Argus Leader still apply.

Please contact Eric Gronlund at (605) 773-3352 if you have questions about the deferral of the application.

c: Ann Mines-Bailey, Assistant Attorney General
Todd Van Maanen, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078
Marty Rost, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164
Sean R Simpson, Vice President & General Counsel, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164

CERTIFICATION

I hereby certify that on April 19, 2016, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated April 19, 2016, regarding deferred Water Permit Application No. 8068-3, Thunder Ridge RE LLC, as set forth below:

Dr. Luke Minion, Pipestone Veterinary Services, PO Box 188, Pipestone MN 56164

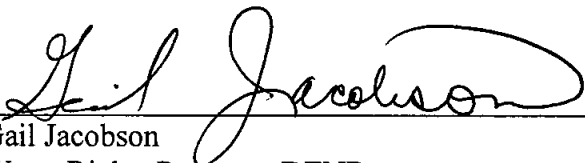
Todd Van Maanen, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078

Marty Rost, Pipestone Veterinary Services, PO Box 188, Pipestone MN 56164

Sean R Simpson, Vice President & General Counsel, Pipestone Veterinary Services, PO Box 188, Pipestone MN 56164

Sent Notice Inter-Office mail to:

Ann Mines-Bailey, Assistant Attorney General, 1302 E. Hwy 14, Suite 1, Pierre SD 57501-8501



Gail Jacobson

Water Rights Program, DENR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

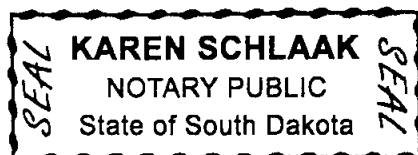
Sworn to, before me, this 19th day of April, 2016

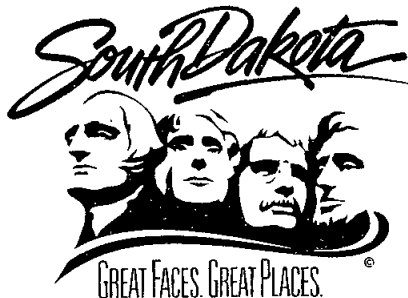


Karen Schlaak

Notary Public

My Commission expires April 1, 2019





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

April 19, 2016

NOTICE

TO: Dr. Luke Minion
Thunder Ridge RE LLC
PO Box 188
Pipestone MN 56164

FROM: Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Water Permit Application No. 8068-3, Thunder Ridge RE LLC

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The Water Rights Program's review of the application and observation well records in preparation to schedule the application back for Board consideration led to question whether the water source is correctly identified as the Sioux Quartzite Wash aquifer. To evaluate the criteria in state law for when a permit application can be issued, it is imperative to correctly identify the source. The well site is in a location of complex geology, and since the South Dakota Geological Survey is already scheduled to drill test holes near the area this spring or early summer, the Chief Engineer recommends continued deferral of the application until the water source can be definitively determined. It will be recommended the application remain deferred until the Geological Survey work is completed and the application is further evaluated.

Since the one year period has past, the application will be brought back before the Board for an update. Specifically, the recommendation to the Water Management Board will be to continue deferral until additional test holes are drilled and the information evaluated. The deferral will be for no longer than March 2017.

The Water Management Board will consider deferred Application No. 8068-3 at 10:00 AM (Central Daylight Time) on Thursday, May 5, 2016, in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre SD. The agenda time is an estimate.

Applicable provisions of the public notice published February 12, 2015, in The New Era and Argus Leader still apply.

Please contact Eric Gronlund at (605) 773-3352 if you have questions about the deferral of the application.

c: Ann Mines-Bailey, Assistant Attorney General
Todd Van Maanen, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078
Marty Rost, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164
Sean R Simpson, Vice President & General Counsel, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164

CERTIFICATION

I hereby certify that on April 19, 2016, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated April 19, 2016, regarding deferred Water Permit Application No. 8068-3, Thunder Ridge RE LLC, as set forth below:

Dr. Luke Minion, Pipestone Veterinary Services, PO Box 188, Pipestone MN 56164

Todd Van Maanen, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078

Marty Rost, Pipestone Veterinary Services, PO Box 188, Pipestone MN 56164

Sean R Simpson, Vice President & General Counsel, Pipestone Veterinary Services, PO Box 188, Pipestone MN 56164

Sent Notice Inter-Office mail to:

Ann Mines-Bailey, Assistant Attorney General, 1302 E. Hwy 14, Suite 1, Pierre SD 57501-8501

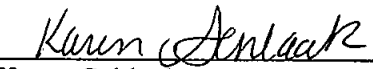


Gail Jacobson

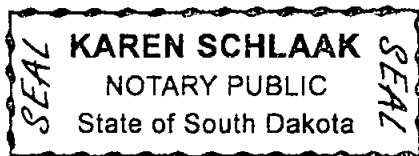
Water Rights Program, DENR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 19th day of April, 2016



Karen Schlaak
Notary Public
My Commission expires April 1, 2019





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

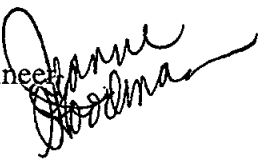
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

May 9, 2016

NOTICE

TO: Dr. Luke Minion
Thunder Ridge RE LLC
PO Box 188
Pipestone MN 56164

FROM: Jeanne Goodman, Chief Engineer
Water Rights Program 

SUBJECT: Water Permit Application No. 8068-3, Thunder Ridge RE LLC

At their May 5, 2016 meeting, the Water Management Board continued the deferral of Water Permit Application No. 8068-3 for commercial use of water at the Thunder Ridge swine confinement facility in Turner County, South Dakota. The continuation of the deferral is to allow time for the South Dakota Geological Survey to drill test holes in order to definitively determine the water source so that the application can be evaluated.

If the water source is identified as being other than the Sioux Quartzite Wash aquifer that was the originally public noticed source, the application will need to be published again with the correct aquifer.

This continued deferral will be until the test holes are completed and the information evaluated. However, the deferral will be for no longer than March 2017. Notice will be sent to Thunder Ridge when this application is scheduled for hearing before the Water Management Board.

Please contact Eric Gronlund at (605) 773-3352 if you have questions about the deferral of the application.

c: Ann Mines-Bailey, Assistant Attorney General
Todd Van Maanen, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078
Marty Rost, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164
Sean R Simpson, Vice President & General Counsel, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164

CERTIFICATION

I hereby certify that on May 9, 2016, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated May 9, 2016, regarding deferred Water Permit Application No. 8068-3, Thunder Ridge RE LLC, as set forth below:

Dr. Luke Minion, Pipestone Veterinary Services, PO Box 188, Pipestone MN 56164

Todd Van Maanen, Eisenbraun & Associates, 215 Walnut, Yankton SD 57078

Marty Rost, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164

Sean R Simpson, Vice President & general Counsel, Pipestone Veterinary Services, 1300 S Hwy 75, Pipestone MN 56164

Sent Notice Inter-Office mail to:

Ann Mines-Bailey, Assistant Attorney General, 1302 E. Hwy 14, Suite 1, Pierre SD 57501-8501



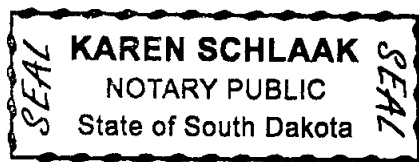
Gail Jacobson
Water Rights Program, DENR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 9th day of May, 2016



Karen Schlaak
Notary Public
My Commission expires April 1, 2019



Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
02/29/2016	1,495,500	
03/01/2016	1,509,400	13,900
03/02/2016	1,519,300	9,900
03/03/2016	1,529,200	9,900
03/04/2016	1,539,400	10,200
03/05/2016	1,555,600	16,200
03/06/2016	1,579,100	23,500
03/07/2016	1,590,500	11,400
03/08/2016	1,600,800	10,300
03/09/2016	1,612,400	11,600
03/10/2016	1,626,200	13,800
03/11/2016	1,640,400	14,200
03/12/2016	1,652,300	11,900
03/13/2016	1,665,800	13,500
03/14/2016	1,678,900	13,100
03/15/2016	1,691,500	12,600
03/16/2016	1,703,700	12,200
03/17/2016	1,713,400	9,700
03/18/2016	1,725,100	11,700
03/19/2016	1,736,200	11,100
03/20/2016	1,748,400	12,200
03/21/2016	1,761,300	12,900
03/22/2016	1,771,300	10,000
03/23/2016	1,782,900	11,600
03/24/2016	1,793,900	11,000
03/25/2016	1,806,300	12,400
03/26/2016	1,819,400	13,100
03/27/2016	1,829,700	10,300
03/28/2016	1,838,400	8,700
03/29/2016	1,849,100	10,700
03/30/2016	1,860,000	10,900
03/31/2016	1,870,100	10,100

West Well		
Date	Reading	Use
02/29/2016	2,349,800	
03/01/2016	2,361,400	11,600
03/02/2016	2,380,400	19,000
03/03/2016	2,401,100	20,700
03/04/2016	2,416,700	15,600
03/05/2016	2,434,500	17,800
03/06/2016	2,469,900	35,400
03/07/2016	2,488,300	18,400
03/08/2016	2,508,400	20,100
03/09/2016	2,528,400	20,000
03/10/2016	2,545,600	17,200
03/11/2016	2,586,900	41,300
03/12/2016	2,602,400	15,500
03/13/2016	2,623,400	21,000
03/14/2016	2,644,200	20,800
03/15/2016	2,661,500	17,300
03/16/2016	2,677,700	16,200
03/17/2016	2,694,800	17,100
03/18/2016	2,710,400	15,600
03/19/2016	2,728,400	18,000
03/20/2016	2,743,900	15,500
03/21/2016	2,767,400	23,500
03/22/2016	2,784,700	17,300
03/23/2016	2,803,400	18,700
03/24/2016	2,818,900	15,500
03/25/2016	2,837,900	19,000
03/26/2016	2,855,400	17,500
03/27/2016	2,870,800	15,400
03/28/2016	2,885,500	14,700
03/29/2016	2,912,000	26,500
03/30/2016	2,930,800	18,800
03/31/2016	2,944,800	14,000

Date	Use in Gallons
02/29/2016	0
03/01/2016	25,500
03/02/2016	28,900
03/03/2016	30,600
03/04/2016	25,800
03/05/2016	34,000
03/06/2016	58,900
03/07/2016	29,800
03/08/2016	30,400
03/09/2016	31,600
03/10/2016	31,000
03/11/2016	55,500
03/12/2016	27,400
03/13/2016	34,500
03/14/2016	33,900
03/15/2016	29,900
03/16/2016	28,400
03/17/2016	26,800
03/18/2016	27,300
03/19/2016	29,100
03/20/2016	27,700
03/21/2016	36,400
03/22/2016	27,300
03/23/2016	30,300
03/24/2016	26,500
03/25/2016	31,400
03/26/2016	30,600
03/27/2016	25,700
03/28/2016	23,400
03/29/2016	37,200
03/30/2016	29,700
03/31/2016	24,100
Monthly Total	945,500

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
03/31/2016	1,870,100	
04/01/2016	1,884,200	14,100
04/02/2016	1,900,600	16,400
04/03/2016	1,913,200	12,600
04/04/2016	1,926,400	13,200
04/05/2016	1,938,400	12,000
04/06/2016	1,952,400	14,000
04/07/2016	1,962,400	10,000
04/08/2016	1,972,800	10,400
04/09/2016	1,985,200	12,400
04/10/2016	1,997,500	12,300
04/11/2016	2,008,900	11,400
04/12/2016	2,019,800	10,900
04/13/2016	2,030,400	10,600
04/14/2016	2,041,300	10,900
04/15/2016	2,050,400	9,100
04/16/2016	2,061,800	11,400
04/17/2016	2,069,400	7,600
04/18/2016	2,078,300	8,900
04/19/2016	2,091,100	12,800
04/20/2016	2,102,600	11,500
04/21/2016	2,112,000	9,400
04/22/2016	2,124,500	12,500
04/23/2016	2,133,600	9,100
04/24/2016	2,141,500	7,900
04/25/2016	2,149,100	7,600
04/26/2016	2,158,200	9,100
04/27/2016	2,168,000	9,800
04/28/2016	2,179,400	11,400
04/29/2016	2,190,100	10,700
04/30/2016	2,200,500	10,400
05/01/2016	2,210,100	9,600

West Well		
Date	Reading	Use
03/31/2016	2,944,800	
04/01/2016	2,967,800	23,000
04/02/2016	2,991,200	23,400
04/03/2016	3,014,900	23,700
04/04/2016	3,038,600	23,700
04/05/2016	3,055,000	16,400
04/06/2016	3,074,000	19,000
04/07/2016	3,089,400	15,400
04/08/2016	3,109,100	19,700
04/09/2016	3,125,900	16,800
04/10/2016	3,140,500	14,600
04/11/2016	3,156,000	15,500
04/12/2016	3,175,200	19,200
04/13/2016	3,190,600	15,400
04/14/2016	3,207,600	17,000
04/15/2016	3,225,200	17,600
04/16/2016	3,240,800	15,600
04/17/2016	3,255,600	14,800
04/18/2016	3,270,600	15,000
04/19/2016	3,287,500	16,900
04/20/2016	3,305,100	17,600
04/21/2016	3,317,000	11,900
04/22/2016	3,332,000	15,000
04/23/2016	3,348,400	16,400
04/24/2016	3,368,800	20,400
04/25/2016	3,385,900	17,100
04/26/2016	3,402,600	16,700
04/27/2016	3,418,900	16,300
04/28/2016	3,435,200	16,300
04/29/2016	3,452,400	17,200
04/30/2016	3,470,000	17,600
05/01/2016	3,486,000	16,000

Date	Use in Gallons
02/29/2016	0
03/01/2016	37,100
03/02/2016	39,800
03/03/2016	36,300
03/04/2016	36,900
03/05/2016	28,400
03/06/2016	33,000
03/07/2016	25,400
03/08/2016	30,100
03/09/2016	29,200
03/10/2016	26,900
03/11/2016	26,900
03/12/2016	30,100
03/13/2016	26,000
03/14/2016	27,900
03/15/2016	26,700
03/16/2016	27,000
03/17/2016	22,400
03/18/2016	23,900
03/19/2016	29,700
03/20/2016	29,100
03/21/2016	21,300
03/22/2016	27,500
03/23/2016	25,500
03/24/2016	28,300
03/25/2016	24,700
03/26/2016	25,800
03/27/2016	26,100
03/28/2016	27,700
03/29/2016	27,900
03/30/2016	28,000
03/31/2016	25,600
Monthly Total	855,600

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
04/30/2016	2,200,500	
05/01/2016	2,210,100	9,600
05/02/2016	2,220,200	10,100
05/03/2016	2,229,100	8,900
05/04/2016	2,241,800	12,700
05/05/2016	2,250,000	8,200
05/06/2016	2,262,200	12,200
05/07/2016	2,274,600	12,400
05/08/2016	2,287,400	12,800
05/09/2016	2,306,100	18,700
05/10/2016	2,316,600	10,500
05/11/2016	2,328,400	11,800
05/12/2016	2,339,300	10,900
05/13/2016	2,350,700	11,400
05/14/2016	2,363,500	12,800
05/15/2016	2,376,100	12,600
05/16/2016	2,385,600	9,500
05/17/2016	2,397,300	11,700
05/18/2016	2,408,900	11,600
05/19/2016	2,413,500	4,600
05/20/2016	2,419,900	6,400
05/21/2016	2,429,500	9,600
05/22/2016	2,438,000	8,500
05/23/2016	2,448,400	10,400
05/24/2016	2,459,500	11,100
05/25/2016	2,475,200	15,700
05/26/2016	2,485,800	10,600
05/27/2016	2,494,600	8,800
05/28/2016	2,504,800	10,200
05/29/2016	2,514,200	9,400
05/30/2016	2,523,600	9,400
05/31/2016	2,532,700	9,100

West Well		
Date	Reading	Use
04/30/2016	3,470,000	
05/01/2016	3,486,000	16,000
05/02/2016	3,503,400	17,400
05/03/2016	3,520,500	17,100
05/04/2016	3,536,900	16,400
05/05/2016	3,558,400	21,500
05/06/2016	3,575,800	17,400
05/07/2016	3,598,400	22,600
05/08/2016	3,620,400	22,000
05/09/2016	3,637,900	17,500
05/10/2016	3,660,800	22,900
05/11/2016	3,678,400	17,600
05/12/2016	3,697,400	19,000
05/13/2016	3,715,200	17,800
05/14/2016	3,738,400	23,200
05/15/2016	3,759,800	21,400
05/16/2016	3,774,500	14,700
05/17/2016	3,788,600	14,100
05/18/2016	3,800,400	11,800
05/19/2016	3,810,800	10,400
05/20/2016	3,821,000	10,200
05/21/2016	3,839,200	18,200
05/22/2016	3,857,200	18,000
05/23/2016	3,878,300	21,100
05/24/2016	3,898,800	20,500
05/25/2016	3,924,000	25,200
05/26/2016	3,942,200	18,200
05/27/2016	3,956,400	14,200
05/28/2016	3,970,800	14,400
05/29/2016	3,985,100	14,300
05/30/2016	4,000,600	15,500
05/31/2016	4,015,300	14,700

Date	Use in Gallons
	0
05/01/2016	25,600
05/02/2016	27,500
05/03/2016	26,000
05/04/2016	29,100
05/05/2016	29,700
05/06/2016	29,600
05/07/2016	35,000
05/08/2016	34,800
05/09/2016	36,200
05/10/2016	33,400
05/11/2016	29,400
05/12/2016	29,900
05/13/2016	29,200
05/14/2016	36,000
05/15/2016	34,000
05/16/2016	24,200
05/17/2016	25,800
05/18/2016	23,400
05/19/2016	15,000
05/20/2016	16,600
05/21/2016	27,800
05/22/2016	26,500
05/23/2016	31,500
05/24/2016	31,600
05/25/2016	40,900
05/26/2016	28,800
05/27/2016	23,000
05/28/2016	24,600
05/29/2016	23,700
05/30/2016	24,900
05/31/2016	23,800
Monthly Total	853,700

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
05/31/2016	2,532,700	
06/01/2016	2,545,400	12,700
06/02/2016	2,558,600	13,200
06/03/2016	2,571,400	12,800
06/04/2016	2,585,400	14,000
06/05/2016	2,598,700	13,300
06/06/2016	2,612,300	13,600
06/07/2016	2,624,400	12,100
06/08/2016	2,637,600	13,200
06/09/2016	2,651,200	13,600
06/10/2016	2,662,400	11,200
06/11/2016	2,671,800	9,400
06/12/2016	2,685,400	13,600
06/13/2016	2,703,400	18,000
06/14/2016	2,735,100	31,700
06/15/2016	2,749,900	14,800
06/16/2016	2,765,400	15,500
06/17/2016	2,781,800	16,400
06/18/2016	2,803,200	21,400
06/19/2016	2,836,000	32,800
06/20/2016	2,850,800	14,800
06/21/2016	2,858,400	7,600
06/22/2016	2,867,000	8,600
06/23/2016	2,881,400	14,400
06/24/2016	2,894,400	13,000
06/25/2016	2,912,500	18,100
06/26/2016	2,928,600	16,100
06/27/2016	2,940,300	11,700
06/28/2016	2,956,000	15,700
06/29/2016	2,971,400	15,400
06/30/2016	2,985,600	14,200

West Well		
Date	Reading	Use
05/31/2016	4,015,300	
06/01/2016	4,038,400	23,100
06/02/2016	4,061,700	23,300
06/03/2016	4,084,900	23,200
06/04/2016	4,107,500	22,600
06/05/2016	4,130,400	22,900
06/06/2016	4,153,900	23,500
06/07/2016	4,172,600	18,700
06/08/2016	4,201,300	28,700
06/09/2016	4,227,400	26,100
06/10/2016	4,256,800	29,400
06/11/2016	4,277,600	20,800
06/12/2016	4,300,400	22,800
06/13/2016	4,332,600	32,200
06/14/2016	4,404,500	71,900
06/15/2016	4,432,000	27,500
06/16/2016	4,462,500	30,500
06/17/2016	4,497,700	35,200
06/18/2016	4,528,500	30,800
06/19/2016	4,589,900	61,400
06/20/2016	4,620,900	31,000
06/21/2016	4,639,500	18,600
06/22/2016	4,657,100	17,600
06/23/2016	4,678,600	21,500
06/24/2016	4,715,400	36,800
06/25/2016	4,737,600	22,200
06/26/2016	4,767,800	30,200
06/27/2016	4,810,200	42,400
06/28/2016	4,837,600	27,400
06/29/2016	4,861,400	23,800
06/30/2016	4,891,400	30,000

Date	Use in Gallons
	0
06/01/2016	35,800
06/02/2016	36,500
06/03/2016	36,000
06/04/2016	36,600
06/05/2016	36,200
06/06/2016	37,100
06/07/2016	30,800
06/08/2016	41,900
06/09/2016	39,700
06/10/2016	40,600
06/11/2016	30,200
06/12/2016	36,400
06/13/2016	50,200
06/14/2016	103,600
06/15/2016	42,300
06/16/2016	46,000
06/17/2016	51,600
06/18/2016	52,200
06/19/2016	94,200
06/20/2016	45,800
06/21/2016	26,200
06/22/2016	26,200
06/23/2016	35,900
06/24/2016	49,800
06/25/2016	40,300
06/26/2016	46,300
06/27/2016	54,100
06/28/2016	43,100
06/29/2016	39,200
06/30/2016	44,200
	0
Monthly Total	1,329,000

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
06/30/2016	2,985,600	
07/01/2016	2,999,400	13,800
07/02/2016	3,012,200	12,800
07/03/2016	3,023,600	11,400
07/04/2016	3,034,300	10,700
07/05/2016	3,048,700	14,400
07/06/2016	3,067,200	18,500
07/07/2016	3,083,900	16,700
07/08/2016	3,099,400	15,500
07/09/2016	3,115,000	15,600
07/10/2016	3,129,300	14,300
07/11/2016	3,146,000	16,700
07/12/2016	3,164,400	18,400
07/13/2016	3,184,000	19,600
07/14/2016	3,200,500	16,500
07/15/2016	3,218,400	17,900
07/16/2016	3,234,800	16,400
07/17/2016	3,250,100	15,300
07/18/2016	3,264,500	14,400
07/19/2016	3,280,500	16,000
07/20/2016	3,298,700	18,200
07/21/2016	3,316,600	17,900
07/22/2016	3,336,700	20,100
07/23/2016	3,364,200	27,500
07/24/2016	3,385,700	21,500
07/25/2016	3,401,300	15,600
07/26/2016	3,416,800	15,500
07/27/2016	3,434,300	17,500
07/28/2016	3,450,100	15,800
07/29/2016	3,465,600	15,500
07/30/2016	3,480,600	15,000
07/31/2016	3,499,200	18,600

West Well		
Date	Reading	Use
06/30/2016	4,891,400	
07/01/2016	4,921,100	29,700
07/02/2016	4,940,800	19,700
07/03/2016	4,962,000	21,200
07/04/2016	4,986,500	24,500
07/05/2016	5,012,500	26,000
07/06/2016	5,046,100	33,600
07/07/2016	5,077,500	31,400
07/08/2016	5,103,500	26,000
07/09/2016	5,130,700	27,200
07/10/2016	5,162,800	32,100
07/11/2016	5,192,800	30,000
07/12/2016	5,228,400	35,600
07/13/2016	5,261,600	33,200
07/14/2016	5,296,000	34,400
07/15/2016	5,325,400	29,400
07/16/2016	5,356,800	31,400
07/17/2016	5,388,200	31,400
07/18/2016	5,416,400	28,200
07/19/2016	5,451,000	34,600
07/20/2016	5,480,200	29,200
07/21/2016	5,509,700	29,500
07/22/2016	5,544,200	34,500
07/23/2016	5,577,000	32,800
07/24/2016	5,607,100	30,100
07/25/2016	5,633,900	26,800
07/26/2016	5,668,400	34,500
07/27/2016	5,707,100	38,700
07/28/2016	5,737,700	30,600
07/29/2016	5,765,600	27,900
07/30/2016	5,794,700	29,100
07/31/2016	5,820,300	25,600

Date	Use in Gallons
	0
07/01/2016	43,500
07/02/2016	32,500
07/03/2016	32,600
07/04/2016	35,200
07/05/2016	40,400
07/06/2016	52,100
07/07/2016	48,100
07/08/2016	41,500
07/09/2016	42,800
07/10/2016	46,400
07/11/2016	46,700
07/12/2016	54,000
07/13/2016	52,800
07/14/2016	50,900
07/15/2016	47,300
07/16/2016	47,800
07/17/2016	46,700
07/18/2016	42,600
07/19/2016	50,600
07/20/2016	47,400
07/21/2016	47,400
07/22/2016	54,600
07/23/2016	60,300
07/24/2016	51,600
07/25/2016	42,400
07/26/2016	50,000
07/27/2016	56,200
07/28/2016	46,400
07/29/2016	43,400
07/30/2016	44,100
07/31/2016	44,200
Monthly Total	1,442,500



8068-3

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

September 13, 2016

Sean R. Simpson
General Counsel
Thunder Ridge RE, LLC
P.O. Box 188
Pipestone, MN 56164

Dear Mr. Simpson:

This is in response to your September 9, 2016, letter requesting an additional day for Dr. Luke Minion to execute and return the Settlement Agreement for the Thunder Ridge enforcement action. I will allow an extra day and look forward to the signed Settlement Agreement dated September 16, 2016.

Thank you for your cooperation in this matter.

Sincerely,

Jeanne Goodman
Chief Engineer
Water Rights Program

cc: Ann Mines-Bailey, Assistant Attorney General

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
07/31/2016	3,499,200	
08/01/2016	3,515,300	16,100
08/02/2016	3,528,000	12,700
08/03/2016	3,544,800	16,800
08/04/2016	3,561,400	16,600
08/05/2016	3,577,600	16,200
08/06/2016	3,592,400	14,800
08/07/2016	3,604,200	11,800
08/08/2016	3,617,000	12,800
08/09/2016	3,635,300	18,300
08/10/2016	3,654,800	19,500
08/11/2016	3,673,400	18,600
08/12/2016	3,689,800	16,400
08/13/2016	3,703,800	14,000
08/14/2016	3,722,200	18,400
08/15/2016	3,737,700	15,500
08/16/2016	3,752,700	15,000
08/17/2016	3,770,000	17,300
08/18/2016	3,787,800	17,800
08/19/2016	3,801,400	13,600
08/20/2016	3,815,600	14,200
08/21/2016	3,823,600	8,000
08/22/2016	3,837,400	13,800
08/23/2016	3,850,500	13,100
08/24/2016	3,870,500	20,000
08/25/2016	3,886,000	15,500
08/26/2016	3,904,800	18,800
08/27/2016	3,915,900	11,100
08/28/2016	3,929,700	13,800
08/29/2016	3,945,400	15,700
08/30/2016	3,960,900	15,500
08/31/2016	3,975,400	14,500

West Well		
Date	Reading	Use
07/31/2016	5,820,300	
08/01/2016	5,850,600	30,300
08/02/2016	5,876,400	25,800
08/03/2016	5,904,800	28,400
08/04/2016	5,933,400	28,600
08/05/2016	5,964,600	31,200
08/06/2016	5,993,400	28,800
08/07/2016	6,022,400	29,000
08/08/2016	6,052,100	29,700
08/09/2016	6,080,600	28,500
08/10/2016	6,114,500	33,900
08/11/2016	6,147,900	33,400
08/12/2016	6,172,500	24,600
08/13/2016	6,199,700	27,200
08/14/2016	6,222,800	23,100
08/15/2016	6,249,100	26,300
08/16/2016	6,272,600	23,500
08/17/2016	6,296,600	24,000
08/18/2016	6,323,200	26,600
08/19/2016	6,348,400	25,200
08/20/2016	6,374,600	26,200
08/21/2016	6,392,800	18,200
08/22/2016	6,410,800	18,000
08/23/2016	6,438,600	27,800
08/24/2016	6,465,100	26,500
08/25/2016	6,501,300	36,200
08/26/2016	6,539,100	37,800
08/27/2016	6,564,400	25,300
08/28/2016	6,589,800	25,400
08/29/2016	6,618,400	28,600
08/30/2016	6,642,600	24,200
08/31/2016	6,670,400	27,800

Date	Use in Gallons
	0
08/01/2016	46,400
08/02/2016	38,500
08/03/2016	45,200
08/04/2016	45,200
08/05/2016	47,400
08/06/2016	43,600
08/07/2016	40,800
08/08/2016	42,500
08/09/2016	46,800
08/10/2016	53,400
08/11/2016	52,000
08/12/2016	41,000
08/13/2016	41,200
08/14/2016	41,500
08/15/2016	41,800
08/16/2016	38,500
08/17/2016	41,300
08/18/2016	44,400
08/19/2016	38,800
08/20/2016	40,400
08/21/2016	26,200
08/22/2016	31,800
08/23/2016	40,900
08/24/2016	46,500
08/25/2016	51,700
08/26/2016	56,600
08/27/2016	36,400
08/28/2016	39,200
08/29/2016	44,300
08/30/2016	39,700
08/31/2016	42,300
Monthly Total	1,326,300

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
10/01/2016	4,354,000	
10/02/2016	4,368,100	14,100
10/03/2016	4,386,400	18,300
10/04/2016	4,404,200	17,800
10/05/2016	4,422,600	18,400
10/06/2016	4,435,400	12,800
10/07/2016	4,448,900	13,500
10/08/2016	4,461,900	13,000
10/09/2016	4,475,900	14,000
10/10/2016	4,489,400	13,500
10/11/2016	4,502,900	13,500
10/12/2016	4,516,800	13,900
10/13/2016	4,535,000	18,200
10/14/2016	4,542,200	7,200
10/15/2016	4,553,400	11,200
10/16/2016	4,564,300	10,900
10/17/2016	4,575,800	11,500
10/18/2016	4,585,600	9,800
10/19/2016	4,595,700	10,100
10/20/2016	4,606,800	11,100
10/21/2016	4,617,400	10,600
10/22/2016	4,629,600	12,200
10/23/2016	4,639,400	9,800
10/24/2016	4,650,300	10,900
10/25/2016	4,661,900	11,600
10/26/2016	4,674,100	12,200
10/27/2016	4,687,600	13,500
10/28/2016	4,699,300	11,700
10/29/2016	4,709,400	10,100
10/30/2016	4,720,600	11,200
10/31/2016	4,732,500	11,900

West Well		
Date	Reading	Use
10/01/2016	7,400,700	
10/02/2016	7,432,500	31,800
10/03/2016	7,468,400	35,900
10/04/2016	7,498,400	30,000
10/05/2016	7,528,500	30,100
10/06/2016	7,580,400	51,900
10/07/2016	7,607,900	27,500
10/08/2016	7,635,400	27,500
10/09/2016	7,662,400	27,000
10/10/2016	7,690,400	28,000
10/11/2016	7,718,100	27,700
10/12/2016	7,762,500	44,400
10/13/2016	7,794,200	31,700
10/14/2016	7,815,400	21,200
10/15/2016	7,835,000	19,600
10/16/2016	7,854,800	19,800
10/17/2016	7,875,400	20,600
10/18/2016	7,894,800	19,400
10/19/2016	7,912,700	17,900
10/20/2016	7,932,500	19,800
10/21/2016	7,949,600	17,100
10/22/2016	7,967,400	17,800
10/23/2016	7,983,200	15,800
10/24/2016	7,998,900	15,700
10/25/2016	8,016,800	17,900
10/26/2016	8,035,500	18,700
10/27/2016	8,067,800	32,300
10/28/2016	8,086,200	18,400
10/29/2016	8,102,400	16,200
10/30/2016	8,118,900	16,500
10/31/2016	8,133,400	14,500

Date	Use in Gallons
10/01/2016	0
10/02/2016	45,900
10/03/2016	54,200
10/04/2016	47,800
10/05/2016	48,500
10/06/2016	64,700
10/07/2016	41,000
10/08/2016	40,500
10/09/2016	41,000
10/10/2016	41,500
10/11/2016	41,200
10/12/2016	58,300
10/13/2016	49,900
10/14/2016	28,400
10/15/2016	30,800
10/16/2016	30,700
10/17/2016	32,100
10/18/2016	29,200
10/19/2016	28,000
10/20/2016	30,900
10/21/2016	27,700
10/22/2016	30,000
10/23/2016	25,600
10/24/2016	26,600
10/25/2016	29,500
10/26/2016	30,900
10/27/2016	45,800
10/28/2016	30,100
10/29/2016	26,300
10/30/2016	27,700
10/31/2016	26,400
Monthly Total	1,111,200

Thunder Ridge, LLC Well Tracking Form

East Well		
Date	Reading	Use in Gallons
08/31/2016	3,975,400	
09/01/2016	3,993,900	18,500
09/02/2016	4,012,500	18,600
09/03/2016	4,028,400	15,900
09/04/2016	4,037,600	9,200
09/05/2016	4,048,800	11,200
09/06/2016	4,060,900	12,100
09/07/2016	4,073,600	12,700
09/08/2016	4,085,500	11,900
09/09/2016	4,100,400	14,900
09/10/2016	4,115,600	15,200
09/11/2016	4,122,900	7,300
09/12/2016	4,131,600	8,700
09/13/2016	4,145,200	13,600
09/14/2016	4,159,900	14,700
09/15/2016	4,173,000	13,100
09/16/2016	4,187,000	14,000
09/17/2016	4,196,800	9,800
09/18/2016	4,205,400	8,600
09/19/2016	4,215,600	10,200
09/20/2016	4,226,100	10,500
09/21/2016	4,239,600	13,500
09/22/2016	4,252,900	13,300
09/23/2016	4,263,400	10,500
09/24/2016	4,275,800	12,400
09/25/2016	4,285,400	9,600
09/26/2016	4,296,000	10,600
09/27/2016	4,313,100	17,100
09/28/2016	4,326,500	13,400
09/29/2016	4,340,400	13,900
09/30/2016	4,354,000	13,600

West Well		
Date	Reading	Use
08/31/2016	6,670,400	
09/01/2016	6,702,300	31,900
09/02/2016	6,726,300	24,000
09/03/2016	6,759,200	32,900
09/04/2016	6,785,400	26,200
09/05/2016	6,810,600	25,200
09/06/2016	6,832,400	21,800
09/07/2016	6,852,300	19,900
09/08/2016	6,873,400	21,100
09/09/2016	6,888,800	15,400
09/10/2016	6,909,400	20,600
09/11/2016	6,926,700	17,300
09/12/2016	6,947,500	20,800
09/13/2016	6,967,200	19,700
09/14/2016	6,989,000	21,800
09/15/2016	7,003,400	14,400
09/16/2016	7,038,300	34,900
09/17/2016	7,063,500	25,200
09/18/2016	7,088,700	25,200
09/19/2016	7,113,400	24,700
09/20/2016	7,139,200	25,800
09/21/2016	7,160,400	21,200
09/22/2016	7,181,400	21,000
09/23/2016	7,212,400	31,000
09/24/2016	7,245,100	32,700
09/25/2016	7,265,400	20,300
09/26/2016	7,286,400	21,000
09/27/2016	7,330,600	44,200
09/28/2016	7,352,900	22,300
09/29/2016	7,376,300	23,400
09/30/2016	7,400,700	24,400

Date	Use in Gallons
	0
09/01/2016	50,400
09/02/2016	42,600
09/03/2016	48,800
09/04/2016	35,400
09/05/2016	36,400
09/06/2016	33,900
09/07/2016	32,600
09/08/2016	33,000
09/09/2016	30,300
09/10/2016	35,800
09/11/2016	24,600
09/12/2016	29,500
09/13/2016	33,300
09/14/2016	36,500
09/15/2016	27,500
09/16/2016	48,900
09/17/2016	35,000
09/18/2016	33,800
09/19/2016	34,900
09/20/2016	36,300
09/21/2016	34,700
09/22/2016	34,300
09/23/2016	41,500
09/24/2016	45,100
09/25/2016	29,900
09/26/2016	31,600
09/27/2016	61,300
09/28/2016	35,700
09/29/2016	37,300
09/30/2016	38,000
	0
Monthly Total	1,108,900

Thunder Ridge, LLC Well Tracking Form

East Well

West Well

East Well			West Well			Kurai Total Well water use water Water in Gallons usage used			
Date	Reading	Use in Gallons	Date	Reading	Use	Date	in Gallons	usage	used
10/31/2016	4,732,500		10/31/2016	8,133,400		10/31/2016	0		0
11/01/2016	4,747,000	14,500	11/01/2016	8,151,900	18,500	11/01/2016	33,000		33,000
11/02/2016	4,758,400	11,400	11/02/2016	8,170,700	18,800	11/02/2016	30,200		30,200
11/03/2016	4,766,800	8,400	11/03/2016	8,188,400	17,700	11/03/2016	26,100		26,100
11/04/2016	4,776,200	9,400	11/04/2016	8,205,800	17,400	11/04/2016	26,800		26,800
11/05/2016	4,785,600	9,400	11/05/2016	8,222,800	17,000	11/05/2016	26,400		26,400
11/06/2016	4,795,400	9,800	11/06/2016	8,240,000	17,200	11/06/2016	27,000		27,000
11/07/2016	4,804,300	8,900	11/07/2016	8,256,400	16,400	11/07/2016	25,300		25,300
11/08/2016	4,813,700	9,400	11/08/2016	8,273,300	16,900	11/08/2016	26,300		26,300
11/09/2016	4,822,800	9,100	11/09/2016	8,291,100	17,800	11/09/2016	26,900		26,900
11/10/2016	4,834,800	12,000	11/10/2016	8,309,200	18,100	11/10/2016	30,100		30,100
11/11/2016	4,843,100	8,300	11/11/2016	8,325,900	16,700	11/11/2016	25,000		25,000
11/12/2016	4,852,700	9,600	11/12/2016	8,343,400	17,500	11/12/2016	27,100		27,100
11/13/2016	4,861,200	8,500	11/13/2016	8,359,800	16,400	11/13/2016	24,900		24,900
11/14/2016	4,870,800	9,600	11/14/2016	8,376,700	16,900	11/14/2016	26,500		26,500
11/15/2016	4,880,500	9,700	11/15/2016	8,394,100	17,400	11/15/2016	27,100		27,100
11/16/2016	4,889,700	9,200	11/16/2016	8,410,500	16,400	11/16/2016	25,600		25,600
11/17/2016	4,898,400	8,700	11/17/2016	8,426,500	16,000	11/17/2016	24,700		24,700
11/18/2016	4,908,900	10,500	11/18/2016	8,443,900	17,400	11/18/2016	27,900		27,900
11/19/2016	4,918,800	9,900	11/19/2016	8,461,800	17,900	11/19/2016	27,800		27,800
11/20/2016	4,927,500	8,700	11/20/2016	8,478,600	16,800	11/20/2016	25,500		25,500
11/21/2016	4,936,800	9,300	11/21/2016	8,494,800	16,200	11/21/2016	25,500		25,500
11/22/2016	4,946,400	9,600	11/22/2016	8,511,700	16,900	11/22/2016	26,500		26,500
11/23/2016	4,956,600	10,200	11/23/2016	8,528,900	17,200	11/23/2016	27,400		27,400
11/24/2016	4,965,400	8,800	11/24/2016	8,546,300	17,400	11/24/2016	26,200		26,200
11/25/2016	4,974,700	9,300	11/25/2016	8,563,000	16,700	11/25/2016	26,000		26,000
11/26/2016	4,984,300	9,600	11/26/2016	8,579,400	16,400	11/26/2016	26,000		26,000
11/27/2016	4,993,400	9,100	11/27/2016	8,597,200	17,800	11/27/2016	26,900		26,900
11/28/2016	5,004,100	10,700	11/28/2016	8,615,200	18,000	11/28/2016	28,700		28,700
11/29/2016	5,012,500	8,400	11/29/2016	8,632,400	17,200	11/29/2016	25,600		25,600
11/30/2016	5,021,900	9,400	11/30/2016	8,649,300	16,900	11/30/2016	26,300		26,300
12/01/2016	5,031,000	9,100	12/01/2016	8,665,700	16,400	12/01/2016	25,500		25,500
Monthly Total						Monthly Total	805,300		830,800

8068-3

Thunder Ridge, LLC Well Tracking Form

East Well

West Well

Rural Water

Well water

use in
Gallons Total Water
used

Date	Reading	Use in Gallons
11/30/2016	5,021,900	
12/01/2016	5,030,000	8,100
12/02/2016	5,046,200	16,200
12/03/2016	5,060,800	14,600
12/04/2016	5,075,600	14,800
12/05/2016	5,091,200	15,600
12/06/2016	5,106,500	15,300
12/07/2016	5,121,400	14,900
12/08/2016	5,137,000	15,600
12/09/2016	5,152,900	15,900
12/10/2016	5,167,400	14,500
12/11/2016	5,183,100	15,700
12/12/2016	5,198,300	15,200
12/13/2016	5,214,700	16,400
12/14/2016	5,229,400	14,700
12/15/2016	5,245,000	15,600
12/16/2016	5,260,300	15,300
12/17/2016	5,275,200	14,900
12/18/2016	5,290,500	15,300
12/19/2016	5,306,100	15,600
12/20/2016	5,323,000	16,900
12/21/2016	5,338,200	15,200
12/22/2016	5,353,800	15,600
12/23/2016	5,368,900	15,100
12/24/2016	5,384,700	15,800
12/25/2016	5,399,700	15,000
12/26/2016	5,414,500	14,800
12/27/2016	5,430,600	16,100
12/28/2016	5,450,800	20,200
12/29/2016	5,475,300	24,500
12/30/2016	5,492,600	17,300
12/31/2016	5,515,300	22,700

Date	Reading	Use
11/30/2016	8,649,300	
12/01/2016	8,665,700	16,400
12/02/2016	8,672,200	6,500
12/03/2016	8,679,200	7,000
12/04/2016	8,684,200	5,000
12/05/2016	8,690,300	6,100
12/06/2016	8,697,200	6,900
12/07/2016	8,705,200	8,000
12/08/2016	8,711,500	6,300
12/09/2016	8,718,500	7,000
12/10/2016	8,725,200	6,700
12/11/2016	8,733,500	8,300
12/12/2016	8,740,100	6,600
12/13/2016	8,746,300	6,200
12/14/2016	8,752,100	5,800
12/15/2016	8,760,100	8,000
12/16/2016	8,767,300	7,200
12/17/2016	8,775,700	8,400
12/18/2016	8,783,100	7,400
12/19/2016	8,790,000	6,900
12/20/2016	8,797,400	7,400
12/21/2016	8,803,800	6,400
12/22/2016	8,810,900	7,100
12/23/2016	8,817,300	6,400
12/24/2016	8,823,900	6,600
12/25/2016	8,830,800	6,900
12/26/2016	8,837,200	6,400
12/27/2016	8,844,100	6,900
12/28/2016	8,848,400	4,300
12/29/2016	8,848,400	0
12/30/2016	8,852,100	3,700
12/31/2016	8,852,100	0

Date	Reading	Use
11/30/2016	150,550	
12/01/2016	157,550	7,000
12/02/2016	166,050	8,500
12/03/2016	171,050	5,000
12/04/2016	177,400	6,350
12/05/2016	185,200	7,800
12/06/2016	193,500	8,300
12/07/2016	200,000	6,500
12/08/2016	205,200	5,200
12/09/2016	209,700	4,500
12/10/2016	216,100	6,400
12/11/2016	223,200	7,100
12/12/2016	230,000	6,800
12/13/2016	235,400	5,400
12/14/2016	243,200	7,800
12/15/2016	249,300	6,100
12/16/2016	255,000	5,700
12/17/2016	261,400	6,400
12/18/2016	266,600	5,200
12/19/2016	272,000	5,400
12/20/2016	277,300	5,300
12/21/2016	282,200	4,900
12/22/2016	290,200	8,000
12/23/2016	297,600	7,400
12/24/2016	303,000	5,400
12/25/2016	309,100	6,100
12/26/2016	314,800	5,700
12/27/2016	320,800	6,000
12/28/2016	325,700	4,900
12/29/2016	330,200	4,500
12/30/2016	336,400	6,200
12/31/2016	342,700	6,300

Date	use in Gallons	Total Water used
11/30/2016	0	0
12/01/2016	24,500	31,500
12/02/2016	22,700	31,200
12/03/2016	21,600	26,600
12/04/2016	19,800	26,150
12/05/2016	21,700	29,500
12/06/2016	22,200	30,500
12/07/2016	22,900	29,400
12/08/2016	21,900	27,100
12/09/2016	22,900	27,400
12/10/2016	21,200	27,600
12/11/2016	24,000	31,100
12/12/2016	21,800	28,600
12/13/2016	22,600	28,000
12/14/2016	20,500	28,300
12/15/2016	23,600	29,700
12/16/2016	22,500	28,200
12/17/2016	23,300	29,700
12/18/2016	22,700	27,900
12/19/2016	22,500	27,900
12/20/2016	24,300	29,600
12/21/2016	21,600	26,500
12/22/2016	22,700	30,700
12/23/2016	21,500	28,900
12/24/2016	22,400	27,800
12/25/2016	21,900	28,000
12/26/2016	21,200	26,900
12/27/2016	23,000	29,000
12/28/2016	24,500	29,400
12/29/2016	24,500	29,000
12/30/2016	21,000	27,200
12/31/2016	22,700	29,000
Monthly Total	696,200	888,350

Thunder Ridge, LLC Well Tracking Form

East Well

West Well

Rural Water

Well water
use in
Gallons

Date	Reading	Use in Gallons
12/31/2016	5,515,300	
01/01/2017	5,515,300	0
01/02/2017	5,515,300	0
01/03/2017	5,515,300	0
01/04/2017	5,515,300	0
01/05/2017	5,515,300	0
01/06/2017	5,515,300	0
01/07/2017	5,515,300	0
01/08/2017	5,530,700	15,400
01/09/2017	5,547,200	16,500
01/10/2017	5,561,500	14,300
01/11/2017	5,575,400	13,900
01/12/2017	5,592,800	17,400
01/13/2017	5,605,600	12,800
01/14/2017	5,618,300	12,700
01/15/2017	5,618,300	0
01/16/2017	5,618,300	0
01/17/2017	5,618,300	0
01/18/2017	5,618,300	0
01/19/2017	5,618,300	0
01/20/2017	5,618,300	0
01/21/2017	5,618,300	0
01/22/2017	5,618,300	0
01/23/2017	5,618,300	0
01/24/2017	5,618,300	0
01/25/2017	5,618,300	0
01/26/2017	5,618,300	0
01/27/2017	5,618,300	0
01/28/2017	5,633,700	15,400
01/29/2017	5,647,500	13,800
01/30/2017	5,650,300	2,800
01/31/2017	5,655,200	4,900

Date	Reading	Use
12/31/2016	8,852,100	
01/01/2017	8,876,550	24,450
01/02/2017	8,900,650	24,100
01/03/2017	8,925,650	25,000
01/04/2017	8,949,900	24,250
01/05/2017	8,970,900	21,000
01/06/2017	8,990,700	19,800
01/07/2017	9,013,100	22,400
01/08/2017	9,013,100	0
01/09/2017	9,013,100	0
01/10/2017	9,013,100	0
01/11/2017	9,013,100	0
01/12/2017	9,013,100	0
01/13/2017	9,013,100	0
01/14/2017	9,013,100	0
01/15/2017	9,028,500	15,400
01/16/2017	9,045,900	17,400
01/17/2017	9,064,500	18,600
01/18/2017	9,079,200	14,700
01/19/2017	9,097,600	18,400
01/20/2017	9,114,400	16,800
01/21/2017	9,128,200	13,800
01/22/2017	9,145,600	17,400
01/23/2017	9,163,200	17,600
01/24/2017	9,177,700	14,500
01/25/2017	9,193,300	15,600
01/26/2017	9,208,100	14,800
01/27/2017	9,219,600	11,500
01/28/2017	9,229,000	9,400
01/29/2017	9,229,000	0
01/30/2017	9,229,000	0
01/31/2017	9,229,000	0

Date	Reading	Use
12/31/2016	342,700	
01/01/2017	348,900	6,200
01/02/2017	358,400	9,500
01/03/2017	365,800	7,400
01/04/2017	372,400	6,600
01/05/2017	444,600	72,200
01/06/2017	462,800	18,200
01/07/2017	478,200	15,400
01/08/2017	495,000	16,800
01/09/2017	509,800	14,800
01/10/2017	546,500	36,700
01/11/2017	568,300	21,800
01/12/2017	586,100	17,800
01/13/2017	604,700	18,600
01/14/2017	627,200	22,500
01/15/2017	646,100	18,900
01/16/2017	661,500	15,400
01/17/2017	677,100	15,600
01/18/2017	699,500	22,400
01/19/2017	723,000	23,500
01/20/2017	737,800	14,800
01/21/2017	752,400	14,600
01/22/2017	770,800	18,400
01/23/2017	786,800	16,000
01/24/2017	801,800	15,000
01/25/2017	817,500	15,700
01/26/2017	834,400	16,900
01/27/2017	852,200	17,800
01/28/2017	859,600	7,400
01/29/2017	873,200	13,600
01/30/2017	899,400	26,200
01/31/2017	925,400	26,000

Date	Gallons
	0
01/01/2017	24,450
01/02/2017	24,100
01/03/2017	25,000
01/04/2017	24,250
01/05/2017	21,000
01/06/2017	19,800
01/07/2017	22,400
01/08/2017	15,400
01/09/2017	16,500
01/10/2017	14,300
01/11/2017	13,900
01/12/2017	17,400
01/13/2017	12,800
01/14/2017	12,700
01/15/2017	15,400
01/16/2017	17,400
01/17/2017	18,600
01/18/2017	14,700
01/19/2017	18,400
01/20/2017	16,800
01/21/2017	13,800
01/22/2017	17,400
01/23/2017	17,600
01/24/2017	14,500
01/25/2017	15,600
01/26/2017	14,800
01/27/2017	11,500
01/28/2017	24,800
01/29/2017	13,800
01/30/2017	2,800
01/31/2017	4,900
Monthly Total	516,800

Thunder Ridge, LLC Well Tracking Form

East Well

West Well

Rural Water

Date	Reading	Use in Gallons
01/31/2017	5,655,200	
02/01/2017	5,660,400	5,200
02/02/2017	5,670,900	10,500
02/03/2017	5,674,500	3,600
02/04/2017	5,679,800	5,300
02/05/2017	5,681,400	1,600
02/06/2017	5,682,600	1,200
02/07/2017	5,686,500	3,900
02/08/2017	5,690,400	3,900
02/09/2017	5,703,600	13,200
02/10/2017	5,719,400	15,800
02/11/2017	5,729,500	10,100
02/12/2017	5,737,400	7,900
02/13/2017	5,749,600	12,200
02/14/2017	5,763,400	13,800
02/15/2017	5,783,900	20,500
02/16/2017	5,795,400	11,500
02/17/2017	5,811,400	16,000
02/18/2017	5,824,600	13,200
02/19/2017	5,837,500	12,900
02/20/2017	5,851,200	13,700
02/21/2017	5,860,800	9,600
02/22/2017	5,860,800	0
02/23/2017	5,860,800	0
02/24/2017	5,860,800	0
02/25/2017	5,860,800	0
02/26/2017	5,860,800	0
02/27/2017	5,860,800	0
02/28/2017	5,860,800	0
		0
		0

Date	Reading	Use
01/31/2017	9,229,000	
02/01/2017	9,229,000	0
02/02/2017	9,229,000	0
02/03/2017	9,229,000	0
02/04/2017	9,229,000	0
02/05/2017	9,229,000	0
02/06/2017	9,229,000	0
02/07/2017	9,229,000	0
02/08/2017	9,229,000	0
02/09/2017	9,229,000	0
02/10/2017	9,229,000	0
02/11/2017	9,229,000	0
02/12/2017	9,229,000	0
02/13/2017	9,229,000	0
02/14/2017	9,229,000	0
02/15/2017	9,229,000	0
02/16/2017	9,229,000	0
02/17/2017	9,229,000	0
02/18/2017	9,229,000	0
02/19/2017	9,229,000	0
02/20/2017	9,229,000	0
02/21/2017	9,229,000	0
02/22/2017	9,242,400	13,400
02/23/2017	9,255,300	12,900
02/24/2017	9,268,700	13,400
02/25/2017	9,281,800	13,100
02/26/2017	9,294,600	12,800
02/27/2017	9,307,000	12,400
02/28/2017	9,323,900	16,900
		0
		0

Date	Reading	Use
01/31/2017	925,400	
02/01/2017	945,400	20,000
02/02/2017	962,100	16,700
02/03/2017	982,400	20,300
02/04/2017	1,006,600	24,200
02/05/2017	1,033,000	26,400
02/06/2017	1,064,500	31,500
02/07/2017	1,112,520	48,020
02/08/2017	1,138,920	26,400
02/09/2017	1,163,810	24,890
02/10/2017	1,189,210	25,400
02/11/2017	1,214,810	25,600
02/12/2017	1,240,090	25,280
02/13/2017	1,265,490	25,400
02/14/2017	1,290,490	25,000
02/15/2017	1,315,390	24,900
02/16/2017	1,341,190	25,800
02/17/2017	1,367,890	26,700
02/18/2017	1,392,390	24,500
02/19/2017	1,417,990	25,600
02/20/2017	1,443,290	25,300
02/21/2017	1,469,990	26,700
02/22/2017	1,495,390	25,400
02/23/2017	1,520,990	25,600
02/24/2017	1,545,890	24,900
02/25/2017	1,571,590	25,700
02/26/2017	1,597,890	26,300
02/27/2017	1,623,690	25,800
02/28/2017	1,644,354	20,664
		0
		0

Date	Well water use in Gallons	Total Water used
01/31/2017	0	0
02/01/2017	5,200	25,200
02/02/2017	10,500	27,200
02/03/2017	3,600	23,900
02/04/2017	5,300	29,500
02/05/2017	1,600	28,000
02/06/2017	1,200	32,700
02/07/2017	3,900	51,920
02/08/2017	3,900	30,300
02/09/2017	13,200	38,090
02/10/2017	15,800	41,200
02/11/2017	10,100	35,700
02/12/2017	7,900	33,180
02/13/2017	12,200	37,600
02/14/2017	13,800	38,800
02/15/2017	20,500	45,400
02/16/2017	11,500	37,300
02/17/2017	16,000	42,700
02/18/2017	13,200	37,700
02/19/2017	12,900	38,500
02/20/2017	13,700	39,000
02/21/2017	9,600	36,300
02/22/2017	13,400	38,800
02/23/2017	12,900	38,500
02/24/2017	13,400	38,300
02/25/2017	13,100	38,800
02/26/2017	12,800	39,100
02/27/2017	12,400	38,200
02/28/2017	16,900	37,564
	0	0
	0	0
Monthly Total	300,500	1,019,454



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

August 12, 2016

Dr. Luke Minion
Thunder Ridge RE, LLC
P.O. Box 188
Pipestone, MN 56164-0188

RE: Thunder Ridge RE, LLC Enforcement Action

Dear Dr. Minion:

The Department of Environment and Natural Resources is taking an enforcement action due to Thunder Ridge using water in excess of reasonable domestic use. Enclosed is a copy of a Notice of Violation, Order for Compliance, and Settlement Agreement to address and settle these violations.

If you agree to the terms of the Settlement Agreement, please sign and date the last page of the Settlement Agreement. Please return the signed copy to the Department within 30 days to the following address:

South Dakota Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol Ave.
Pierre, SD 57501-3181

The Notice of Violation is effective thirty days from the day of service, unless you submit a written request for a hearing before the Water Management Board regarding the allegations in the Notice of Violation. The written request must be filed within thirty days, by delivery to: Water Management Board, Department of Environment and Natural Resources, 523 East Capitol Ave., Pierre, SD 57501-3182. Should you fail to request a hearing within that time, the allegations stated herein shall be deemed fact and the Notice of Violation shall be immediately effective.

A copy of the Settlement Agreement will be returned to you, once all parties have signed the agreement. If you have any questions regarding this letter, the enclosures, or any other matters pertaining to your compliance status, please contact me or Assistant Attorney General Ann Mines-Bailey.

Sincerely,


Jeanne Goodman
Chief Engineer

cc: Ann Mines-Bailey, South Dakota Office of the Attorney General

STATE OF SOUTH DAKOTA
SECRETARY OF THE
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF WATER RIGHTS	)	VIOLATION AND
VIOLATIONS AT	)	ORDER
THUNDER RIDGE RE, LLC	)	

TO: Dr. Luke Minion, Registered Agent
Thunder Ridge RE, LLC
P.O. Box 188
Pipestone, MN 56164-0188

The Chief Engineer, of the Department of Environment and Natural Resources, Water Rights Program, pursuant to South Dakota Codified Laws (SDCL) 46-1-11 and 46-2-18, hereby gives NOTICE that Thunder Ridge RE, LLC ("Thunder Ridge") has violated the South Dakota Water Rights SDCL Title 46 and Administrative Rules of South Dakota (ARSD) 74:02 as specified below.

The FACTS alleged to constitute these violations are as follows:

1. Thunder Ridge RE, LLC is a concentrated swine feeding operation in Turner County, South Dakota.
2. Thunder Ridge is a "person" within the meaning of SDCL 46-1-6(15).
3. SDCL 46-1-15 states:

Except as otherwise provided throughout this title, no person may appropriate the water of this state for any purpose without first obtaining a permit to do so.

4. SDCL 46-1-6(7) in part defines domestic use as the "*use of water not exceeding eighteen gallons per minute on an average daily basis.... Stock watering is a domestic use. Use of water not exceeding eighteen gallons per minute on an average daily basis for livestock*

in a confinement operation, including water for drinking, sanitary and general welfare purposes and for like purposes by those caring for the livestock, is a domestic use..”

5. ARSD 74:02:01:01(7) further defines reasonable domestic use as *“the use of 25,920 gallons of water per day or less as necessary for domestic purposes, with a maximum pumping rate of 25 gallons per minute.”*

6. ARSD 74:02:01:01(1) in part defines commercial use as *“water use supplied from other than a common water distribution system to a business such as...a livestock confinement operation that exceeds reasonable domestic use[.]”*

7. ARSD 74:02:01:03 states in part:

A water permit or right is required for all beneficial uses of water except for:

(1) Validated vested right claims;

(2) Water distribution systems diverting 18 gallons per minute or less;

(3) Domestic uses not exceeding reasonable domestic use; and

(4) Livestock uses within a confinement operation not exceeding reasonable domestic use or stock watering outside of a confinement operation.

8. Thunder Ridge was originally known as NuPig owned by Ron Ortman, and was required to have coverage under the General Water Pollution Control Permit for Concentrated Animal Feeding Operations by the South Dakota Department of Environment and Natural Resources because of the number of swine to be produced at the facility.

9. On September 17, 2014, approval of the application for general permit coverage was issued by Kent Woodmansey, Feedlot Permitting Program, DENR.

10. The September 17, 2014, approval letter for general permit coverage letter for Thunder Ridge, formerly NuPig, contained the following requirement: *“Based on the proposed*

*water supply, you may need to obtain a water right permit. The general permit requires any operation to obtain a water right permit if the operation uses more than 25,920 gallons per day (18 gallons per minute) or if the combined maximum pump capacity exceeds 25 gallons per minute. This water usage is for the well only and does not include any water supplied by rural water.....If you do not obtain a water right permit, you will need to verify the facility will not exceed the maximum allowable daily water usage from the proposed well(s), the department is requiring a flow meter be installed between the proposed well and the first water use location prior to receiving a Certificate of Compliance and permit coverage. **Daily pumping records must be maintained at the site and a monthly report of the daily water usage must be submitted to the department for review by the 10th of each month[.]***

11. The application for the general permit coverage for NuPig and DENR approval of the application was transferred from Ron Ortman of NuPig to Dr. Luke Minion with Thunder Ridge on October 22, 2014. A copy of the original application approval was included with the transfer letter to Dr. Minion.
12. Thunder Ridge filed Water Right Permit Application No. 8068-3 in December 2014 to appropriate water from two wells pumping at a total diversion rate of 0.11 cubic feet per second (50 gallons per minute) for a swine production facility.
13. Water Right Permit Application No. 8068-3 included a letter from Todd VanMaanen, Project Engineer, indicating Thunder Ridge water well usage would be within the “domestic use range, but a permit was desired to protect their water source and potential management changes.”

14. After a technical review of Water Right Permit Application No. 8068-3 by Water Rights Engineer Ken Buhler, the Chief Engineer of the Water Rights Program recommended deferral of the application for one year pending the collection of additional aquifer water levels from observation wells located near Thunder Ridge.
15. The Chief Engineer's recommendation on Water Right Permit Application No. 8068-3 issued February 6, 2015, contained the following note:

"The application will be brought back before the Water Management Board at their March 2016 meeting. Thunder Ridge RE LLC may divert water for livestock watering without a water permit provided "reasonable domestic use" is not exceeded. Reasonable domestic use is the use of 25,920 gallons of water per day or less as necessary for domestic purposes, with a maximum pumping capacity of 25 gallons per minute.
16. The Chief Engineer's recommendation for deferral was public noticed on February 12, 2015, in the Parker New Era and Argus Leader newspapers and considered by the Water Management Board on March 4, 2015. Thunder Ridge did not contest the deferral recommendation, and the Water Management Board deferred Water Right Permit Application No. 8068-3 for one year.
17. On July 30, 2015, Kent Woodmansey issued an as-built approval letter to Dr. Luke Minion regarding Thunder Ridge. The letter included the following requirement: *"The daily pumping records must be maintained at the site and a monthly report of the daily water usage submitted to the department for review by the 10th of each month."*
18. On July 30, 2015, Kent Woodmansey issued general coverage under the General Water Pollution Control Permit for Concentrated Animal Feeding Operations Permit Number SDG-0100505 to Dr. Luke Minion for Thunder Ridge.

19. As per the requirements in the September 17, 2014, and the July 30, 2015, letters from Kent Woodmansey, Thunder Ridge submitted monthly water use reports for January, February, March, April, May, and June 2016.
20. In January 2016, Thunder Ridge exceeded reasonable domestic use of 25, 920 gallons per day on 12 separate days.
21. In February 2016, Thunder Ridge exceeded reasonable domestic use of 25, 920 gallons per day on 14 separate days.
22. On March 3, 2016, the Chief Engineer issued an Order to Marty Rost of Pipestone Veterinary Clinic to limit the use of ground water by Thunder Ridge to reasonable domestic use. The Order stated in part:

"Pursuant to SDCL 46-2-18 this notice is an order to immediately limit the use of ground water to reasonable domestic use at the Thunder Ridge RE, LLC, concentrated swine feeding operation in the NE1/4 Section 19, T100N, R55W in Turner County."
23. In March 2016, Thunder Ridge exceeded reasonable domestic use of 25, 920 gallons per day on 26 separate days.
24. On April 19, 2016, the Chief Engineer issued a Notice to Thunder Ridge the Chief Engineer recommended deferral of Application 8068-3 for up to one additional year because further technical review of the application indicated it is not clear from what aquifer the well being used by Thunder Ridge was producing water. The Notice also informed Thunder Ridge the deferred Application 8068-3 would be considered by the Water Management Board during a hearing on May 5, 2016.
25. In April 2016, Thunder Ridge exceeded reasonable domestic use of 25, 920 gallons per day on 27 separate days.

26. The Water Management Board considered deferred Application 8068-3 on May 5, 2016, and deferred the application for one year allowing for further study to determine what aquifer is the source of water.
27. On May 9, 2016, the Chief Engineer notified Thunder Ridge of the Water Management Board's decision to defer the application for up to one year.
28. In May 2016, Thunder Ridge exceeded reasonable domestic use of 25, 920 gallons per day on 20 separate days.
29. In June 2016, Thunder Ridge exceeded reasonable domestic use of 25,920 gallons per day on 30 separate days.
30. In July 2016, Thunder Ridge exceeded reasonable domestic use of 25, 920 gallons per day on 31 separate days.
31. In total Thunder Ridge exceeded reasonable domestic use of 25, 920 gallons per day a total of 160 days.
32. SDCL 46-5-46 states:

No person may engage in unauthorized use of water, may waste water, or may violate the terms or conditions of a permit or license to appropriate water.
33. **The use of water in excess of the reasonable domestic use rate without a water right permit is a violation of SDCL 46-1-15 and 46-5-46 and ARSD 74:02:01:03.**

ORDER

WHEREFORE, as a result of these FACTS and VIOLATIONS, and pursuant to SDCL 46-1-11, 46-2-3.1, and 46-2-18, the Chief Engineer hereby ORDERS that the following corrective actions be taken by Thunder Ridge RE, LLC:

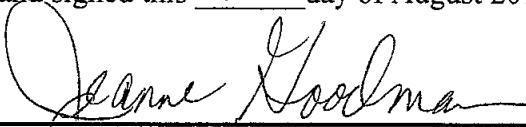
1. Reduce the water use at the Thunder Ridge facility to less than reasonable domestic use immediately. Water use is considered that amount of water from the facility's well only and does not include the use of rural water.
2. Submit monthly reports on water use at Thunder Ridge to the Chief Engineer, Water Rights Program.

NOTICE IS HEREBY GIVEN that this Order is effective thirty days from the service of this notice , unless Thunder Ridge RE, LLC submits a written request for a hearing before the Water Management Board regarding the allegations and Order. The written request must be filed before the expiration of thirty days, by deliver to: Water Management Board, Department of Environment and Natural Resources, 523 East Capitol Ave., Pierre, SD 57501-3182.

NOTICE IS ALSO GIVEN THAT, should Thunder Ridge RE, LLC fail to request a hearing within that time, the allegations stated herein shall be deemed fact and the Order shall be immediately effective.

NOTICE IS ALSO HEREBY GIVEN that these violations, as well as a failure to comply with the provisions of this Order, may subject the Thunder Ridge RE, LLC to adverse action as to their water permit application and legal action for civil penalties and for damages to the natural resources pursuant to SDCL 46-1-11.

Dated and signed this 12th day of August 2016.

A handwritten signature in cursive script, appearing to read "Jeanne Goodman", written over a horizontal line.

Jeanne Goodman

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

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Tracking Number: 9590940218836104082409

Product & Tracking Information

Postal Product:
First-Class Mail®

Features:
USPS Tracking®

See tracking for related item: 70161370000226246568

DATE & TIME	STATUS OF ITEM	LOCATION
August 15, 2016 , 10:25 am	Delivered	PIPESTONE, MN 56164

Your item was delivered at 10:25 am on August 15, 2016 in PIPESTONE, MN 56164.

August 12, 2016 , 5:00 pm Return Receipt Associated

Available Actions

[Text Updates](#)

[Email Updates](#)

Track Another Package

Tracking (or receipt) number

[Track It](#)

Manage Incoming Packages

Track all your packages from a dashboard.
No tracking numbers necessary.

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SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Dr. Luke Minion
PO Box 188
Pipestone MN 56164



9590 9402 1883 6104 0824 09

2. Article Number (Transfer from service label)

7016 1370 0002 2624 6568

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY
A. Signature

X *Dr. Luke Minion*

☐ Agent

☐ Addressee

B. Received by (Printed Name)

Erin Feikema

C. Date of Delivery

8/5/16

D. Is delivery address different from item 1?

If YES, enter delivery address below: ☐ Yes ☐ No

3. Service Type

☐ Adult Signature

☐ Adult Signature Restricted Delivery

☐ Certified Mail®

☐ Certified Mail Restricted Delivery

☐ Collect on Delivery

☐ Collect on Delivery Restricted Delivery

☐ Registered Mail

☐ Registered Mail Restricted Delivery

☐ Signature Confirmation

☐ Signature Confirmation Restricted Delivery

☐ Priority Mail Express®

☐ Registered Mail™

☐ Registered Mail Restricted Delivery

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**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only**

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PIPESTONE, MN 56164 **OFFICIAL USE**

Certified Mail Fee

\$ **3.30**

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$ **2.70**

☐ Return Receipt (electronic) \$ **0.00**

☐ Certified Mail Restricted Delivery \$ **0.00**

☐ Adult Signature Required \$ **0.00**

☐ Adult Signature Restricted Delivery \$ **0.00**

Postage

\$ **1.36**

Total Postage and Fees

\$ **7.36**

0501

08

Postmark
Here

08/12/2016

Sent To

Street and Apt. No., or PO Box No.

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-8047

See Reverse for Instructions

Goodman, Jeanne

From: Jacobson, Gail
Sent: Monday, August 15, 2016 11:48 AM
To: Goodman, Jeanne; Gronlund, Eric
Subject: the envelope for Thunder Ridge was picked up at 10:25 a.m. according to tracking from USPS

Gail Jacobson
DENR - Water Rights
523 E Capitol Ave
Pierre SD 57501
605-773-3352 - Phone
605-773-4068 - Fax
gail.jacobson@state.sd.us

Goodman, Jeanne

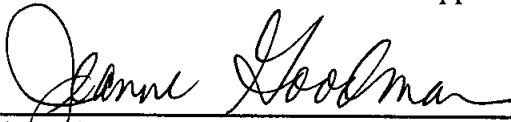
From: Goodman, Jeanne
Sent: Monday, August 15, 2016 2:57 PM
To: Pirner, Steve; Tollefsrud, Tim
Cc: Murray, Vicki; Gronlund, Eric; Mines, Ann
Subject: Thunder Ridge NOV

Todd VanMaanen with Stockwell Engineering called to inform DENR that according to Pipestone Veterinary Clinic's in-house counsel Sean Simpson, Thunder Ridge is going to accept DENR's NOV, Order, and Settlement Agreement. They are currently working on bringing in rural water to the site but have to pay for crop damage to accomplish that. They are negotiating the damage with landowners.

Todd was the design engineer for Thunder Ridge.

**DIVISION OF ENVIRONMENTAL SERVICES
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DOCUMENT REVIEW SIGN-OFF SHEET**

I have reviewed this document and approve of its contents.



Originating Signature

7/14/16

Date

Comments: *Thunder Ridge RE, LLC has continued to pump water at a rate greater than reasonable domestic use despite numerous notifications of the requirement to pump less than 25,920 gallons per day.*

I have reviewed this document and approve of its contents.

Supervisor Signature

Date

I have reviewed this document and approve of its contents.

Department Legal Advisor

Date

I have reviewed this document and approve of its contents.

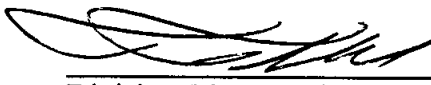


Attorney General's Office
for form

7/27/16

Date

I have reviewed this document and approve ~~of its contents.~~



Division Director Signature

8/5/16

Date

I have reviewed this document and approve of its contents.



Department Secretary

8/10/16

Date

RECEIVED

SEP 12 2016

WATER RIGHTS
PROGRAM

THUNDER RIDGE RE, LLC
P.O. Box 188
Pipestone, MN 56164

September 9, 2016

(via email and US Mail)

SD Department of Environment & Natural Resources
Attn: Jeanne Goodman
Joe Foss Building
523 East Capital
Pierre, South Dakota 56501

Re: Thunder Ridge RE, LLC Enforcement Action – Settlement Acceptance

Dear Ms. Goodman:

Please accept this correspondence on behalf of Thunder Ridge RE, LLC ("TR"). As of August 15, 2016, TR is receipt of the Violation and Order and Settlement Agreement from the SD Department of Environment and Natural Resources. After review and consideration, TR accepts, acknowledges and agrees with the substance of both the Order and Settlement Agreement. TR will execute and abide by the Settlement Agreement terms. Unfortunately, the authorized signor, Dr. Luke Minion, is out of the country until September 16, 2016. I ask that TR be allowed to execute and forward the Settlement Agreement on September 16, 2016, one day past the 30 day timeline imposed under the Order and Settlement Agreement.

I thank you for your consideration of this matter.

Sincerely,



Sean R. Simpson
General Counsel

cc. Ann Mines-Bailey, South Dakota Office of Attorney General
Todd VanMaanen



8068-3

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

September 13, 2016

Sean R. Simpson
General Counsel
Thunder Ridge RE, LLC
P.O. Box 188
Pipestone, MN 56164

Dear Mr. Simpson:

This is in response to your September 9, 2016, letter requesting an additional day for Dr. Luke Minion to execute and return the Settlement Agreement for the Thunder Ridge enforcement action. I will allow an extra day and look forward to the signed Settlement Agreement dated September 16, 2016.

Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in cursive script that reads 'Jeanne Goodman'.

Jeanne Goodman
Chief Engineer
Water Rights Program

cc: Ann Mines-Bailey, Assistant Attorney General

NOTES

RECEIPT

DATE

9-20-16

NO.

794037

RECEIVED FROM

Pipestone Veterinary Clinic

ADDRESS

Pipestone, MN

\$15,600⁰⁰

FOR

Well Rehabilitation and Plugging Subfund

ACCOUNT			HOW PAID		
AMT. OF ACCOUNT			CASH		
AMT. PAID			CHECK	15600	00
BALANCE DUE			MONEY ORDER		

002035

BY

W

©2001 REDIFORM ® 81806

Internal Cash Transmittal
(Submit to Fiscal Office with monies received)

Program: Water Rights

Funding Source:

Amount: \$15,600.00

Facility Name: Pipestone Veterinary Clinic

[Signature]
Signature

9/20/16
Date

Please deposit
\$15,600 check from
Pipestone Veterinary Clinic
into the:
Well Rehabilitation and
Plugging Subfund

3075 202080678722

DOCUMENT IS PRINTED ON CHEMICALLY REACTIVE PAPER - THE BACK OF THIS DOCUMENT INCLUDES A TAMPER EVIDENT CHEMICAL WASH WARNING BOX

002035

THUNDER RIDGE RE, LLC

P.O. BOX 370
PIPESTONE, MN 56164



P.O. Box 190
Pipestone, MN 56164
(507) 825-3344

78-844/914

*FIFTEEN THOUSAND SIX HUNDRED AND XX / 100

PAY

DATE

AMOUNT

9/14/2016

*****15,600.00*

TO THE
ORDER OF

SD Depart of Environment & Nat
c/o Department of Revenue
Box 5055
Sioux Falls, SD 57117-5055
SDDEN



AUTHORIZED SIGNATURE



⑈002035⑈ ⑆091408446⑆ 4100121692⑈

002035

THUNDER RIDGE RE, LLC

9/14/2016

DENR

SETTLEMENT AGREEMENT

15,600.00

0.00

15,600.00

Check: 002035

9/14/2016

SD Depart of Environment & Nat

15,600.00



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

September 20, 2016

Dr. Luke Minion
Thunder Ridge RE, LLC
P.O. Box 188
Pipestone, MN 56164

RE: Thunder Ridge Final Settlement Agreement

Dear Dr. Minion:

Enclosed is a copy of the signed Settlement Agreement for Thunder Ridge's violations. In accordance with SDCL 34A-10-17, we are entering into this administrative settlement agreement with you for the violations detailed in the Notice of Violation issued August 12, 2016.

As noted in paragraph #3 of the Settlement Agreement, this agreement shall settle the Department's claims raised in the Notice of Violation.

If you have any questions regarding this letter, the enclosures, or any other matters pertaining to your compliance status, please contact Jeanne Goodman of my staff. Thank you for your efforts responding to the violations.

Sincerely,

Steven M. Pirner
Secretary

cc: Ann Mines-Bailey, Assistant Attorney General

SEP 16 2016

**WATER RIGHTS
PROGRAM**

STATE OF SOUTH DAKOTA
SECRETARY OF THE
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

[illegible]

TO: Dr. Luke Minion
Thunder Ridge RE, LLC
P.O. Box 188
Pipestone, MN 56164

This Settlement Agreement (hereinafter "Agreement") is made and entered into by and between the South Dakota Department of Environment and Natural Resources (hereinafter "DENR") and Thunder Ridge RE, LLC.

LEGAL AUTHORITY

This Agreement is made pursuant to the provisions of South Dakota Codified Laws (SDCL) Chapter 46-1 giving the State authority to protect the public interest in the development of the water resources of the state and to determine what water of the state can be converted to public use or controlled for public protection. SDCL 46-1-11 states: "...any person, firm, or corporation violating any of the provisions of Chapters 46-4 to 46-10, inclusive, is guilty of a Class 2 misdemeanor. In addition, a civil fine of not more than five hundred dollars may be imposed for the violation. Each day of noncompliance with the provisions of this title shall be deemed a separate violation."

The last line of SDCL 34A-10-17 states: "The secretary may enter into administrative settlement agreements in regard to violations of the provisions of Title 34A, 45, or 46, including stipulated settlements of any civil penalty authorized under that title." In accordance with these statutes, the Secretary has the authority to file a civil lawsuit for penalties due to violations of

South Dakota's Water Rights law. This Settlement Agreement is entered into in settlement of these claims.

SETTLEMENT AGREEMENT

Based on the alleged violations listed in the attached Notice of Violation, it has been alleged that Thunder Ridge RE, LLC has violated South Dakota's water rights statutes and regulations. These allegations shall be addressed through the Order and through the settlement of DENR's civil penalty claim discussed below.

Wherefore, as provided for under SDCL 34A-10-17, the parties above named by way of the signature of their representatives as indicated below for and in consideration of the matters set forth above and other good and valuable consideration, hereby stipulate and agree as follows:

1. Thunder Ridge RE, LLC shall comply with the Order as attached unless otherwise amended herein.

2. Thunder Ridge RE, LLC shall pay a sum of fifteen thousand six hundred dollars (\$15,600) to the DENR in settlement of DENR's civil penalty claim against Thunder Ridge RE, LLC.

Payment shall be made to DENR within 30 days of the effective date of the Agreement.

Upon payment to DENR, this payment will be deposited in the ~~Regulated Substance~~

~~Response Fund.~~
Subfund 10

will Rehabilitation and Drilling

3. This Agreement shall settle the claims raised by the accompanying Notice of Violation issued to Thunder Ridge RE, LLC by DENR, as well as all civil, criminal, or administrative actions available to the parties as a result of the violations alleged herein.

This Agreement shall be enforceable by the parties pursuant to the applicable laws of the State of South Dakota.

Signed and dated as indicated below.

9/20/16
Date


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

9.14.2016
Date


Dr. Luke Minion
Thunder Ridge RE, LLC

Gronlund, Eric

From: Brad Woerner <bwoerner@stockwellengineers.com>
Sent: Friday, February 03, 2017 9:25 AM
To: Gronlund, Eric
Subject: Thunder Ridge water rights application

Eric,
I spoke with Marty Roast at Pipestone. Marty indicated that 46 ac-ft (15 million gallons/year) would suffice for this application.

If you need anything further, please let me know.
Have a great weekend.

Thanks!

Bradley S. Woerner, PE
PROJECT MANAGER



bwoerner@stockwellengineers.com

Phone: 605.665.8092

Cell: 605.660.1362

Fax: 605.665.0523

215 Walnut Street

Yankton, SD 57078

stockwellengineers.com

This e-mail may contain confidential and/or privileged information. If you are not the intended recipient (or have received this e-mail in error) please notify the sender immediately and destroy this e-mail. Any unauthorized copying, disclosure or distribution of the material in this email is strictly forbidden.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

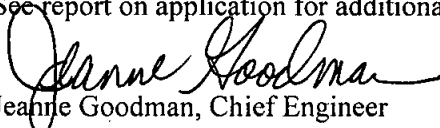
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8068-3, Thunder Ridge RE, LLC**

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. 8068-3, Thunder Ridge RE LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone MN 56364.

The Chief Engineer is recommending APPROVAL of Application No. 8068-3 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 Water Permit No. 8068-3 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. Permit No. 8068-3 are 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. Permit No. 8068-3 are 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
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. 8068-3 authorize a total annual diversion of 46.0 acre feet of water.

See report on application for additional information.


Jeanne Goodman, Chief Engineer
February 3, 2017

REVISED REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8068-3
THUNDER RIDGE RE, LLC.
JANUARY 23, 2017

Water Permit Application No. 8068-3 proposes to appropriate water from the Sioux Quartzite aquifer for commercial use in a swine confinement facility. This application proposes a water permit authorizing a maximum diversion rate of 0.11 cubic feet of water per second (cfs) from two wells completed into the Sioux Quartzite aquifer. The existing wells are 272 and 306 feet deep and are located in the N½ NE¼ Sec. 19, T100N-R55W.

Water Permit Application No. 8068-3 was filed with the DENR-Water Rights Program on December 15, 2014. Interpretation of a South Dakota Water Well Completion Report for a well 272 feet deep included with the application, along with discussions with the well driller, in context with the hydrogeological information available from the area, lead to the conclusion that “The likely water source for the completed well that this application proposes to use is Undifferentiated Cretaceous/Sioux Quartzite Wash” and was referred to as the Sioux Quartzite Wash aquifer (Buhler 2015). Observation well data documented that water levels in the Sioux Quartzite Wash aquifer in the area had declined in the past but appeared to be stabilizing (Water Rights, 2017a).

The Chief Engineer recommended deferral of Application No. 8068-3 for one year in order to have a sufficient period of record in observation wells to determine if water levels have equilibrated in the Sioux Quartzite Wash aquifer in this area. On March 4, 2015, the Water Management Board deferred consideration of Water Permit Application No. 8068-3 for one year. While preparing to reschedule the application for Board consideration, the DENR-Water Rights Program’s review of the application and observation well records brought into question the proposed water source and whether it was correctly identified as the Sioux Quartzite Wash aquifer. In April 2016, the Chief Engineer’s recommendation to the Water Management Board was to continue deferral of the application until the water source can be definitively determined. While the application was pending consideration, the facility was constructed and the two wells were used to provide water for the swine confinement operation.

The South Dakota Geological Survey reviewed the DENR-Water Rights’ staff report prepared for the application, evaluated the completion report provided for the 272 foot deep well, analyzed drill cuttings from one of the wells at the site, and reviewed the area geology. The Geological Survey concluded that “Quartzite wash does NOT seem to be the best candidate to be the water source [for Water Permit Application No. 8068-3]” (Iles, 2017). Since quartzite wash is “commonly composed primarily of quartz sand resulting from the weathering, transport, and re-deposition of sand grains from the Sioux Quartzite”, Iles (2017) concluded that the water source “is either weathered, in-place quartzite or quartzite that was never indurated (cemented) to the extent that is commonly observed in this geologic unit” (Iles, 2017).

AQUIFER: SIOUX QUARTZITE (SOUX)

AREA GEOLOGY AND HYDROLOGY:

Depending on the author, the Sioux Quartzite is often not considered an aquifer, or at best, is considered a minor aquifer. However, hundreds of wells have been successfully completed into the Sioux Quartzite in South Dakota (Water Rights, 2017c). There are currently 58 water rights/permits appropriating water from the Sioux Quartzite aquifer in South Dakota (Water Rights, 2017b). The Sioux Quartzite is a Precambrian-aged ortho-quartzite (i.e. a sedimentary formation composed of massive, pink and red colored quartz sand cemented to a non-porous quartzite with silica) (Baldwin, 1949). Except for the places where the quartzite is interbedded with mudstone and poorly cemented sand, the primary (intergranular) porosity of the rock is extremely low. Generally, water is transmitted to wells through secondary porosity and permeability features (i.e. joints and fractures). South Dakota Water Well Completion Reports for the wells that this application proposes to use identify several feet (22 and 41 feet respectively) of what has been interpreted as weathered in-place quartzite or quartzite that was never indurated (cemented). Another well which was constructed and later plugged, approximately 200 feet west of the second well that this application proposes to use, identified 15 feet of hard sand overlying rock. The completion report indicates the well pumped dry and it was consequently plugged (Water Rights, 2017c). The areal extent of this weathered or poorly indurated zone of Sioux Quartzite these wells are developed into has not been delineated.

Mapping of the Precambrian surface, McCormick (2010) shows the depth to the quartzite can change rapidly within a short distance. Pre-glacial streams incised numerous irregular valleys on the quartzite surface resulting in a craggy and rugged upper surface (Baldwin, 1949). Nearby, Quartzite wash, the Dakota Formation, the Carlile Shale, the Niobrara Formation and glacial outwash (Schulz, 1991) overly the Sioux Quartzite. In addition, undifferentiated Cretaceous-age material and the Cretaceous-age Split Rock Creek Formation also directly overly the Sioux Quartzite in this area (Iles, 2017). The Sioux Quartzite likely is hydrologically connected to overlying aquifers.

Although the Sioux Quartzite is expected to obtain a thickness of at least 950 feet thick (Gries, 1983), water-supply wells commonly penetrate the quartzite to a depth of 200 feet or less. Subsurface information from well logs indicates the Sioux Quartzite extends over a regional scale (McCormick, 2010). In some areas, conditions are favorable for the quartzite to be considered an aquifer. Where the Sioux Quartzite is an aquifer, it is commonly under unconfined conditions near outcrop areas and under confined conditions elsewhere. The aquifer is under confined conditions in this project area. The Sioux Quartzite was encountered 250 and 265 feet below grade and the static water level reported for the wells this application proposes to use was reported to be 90 feet below grade on October 30, 2014, and 105 feet below grade on September 16, 2015, respectively.

Recharge to the Sioux Quartzite occurs through infiltration of precipitation at or near outcrops and through leakage from other aquifers that are hydrologically connected. Discharge from the Sioux Quartzite is primarily to connected aquifers, where the gradient is favorable. The recharge and discharge potential between the Sioux Quartzite aquifer and hydrologically connected aquifers is dependent upon the water level differentials between the aquifers.

Discharge from the Sioux Quartzite aquifer is also through well withdrawals, although well withdrawals are expected to be minor in comparison to the rate of water that naturally discharges from the Sioux Quartzite aquifer. There are a total of 58 water rights/permits appropriating water from the Sioux Quartzite aquifer in South Dakota; designated uses of these appropriations are shown in Table 1. The total combined instantaneous diversion rate authorized from Sioux Quartzite aquifer appropriations is 32.566 cfs. It should be noted that a single appropriation, (Vested Right No. 5400-3, L G Everist, Inc.) authorizes a rate of 12.25 cfs for mine dewatering at a quarry in Dell Rapids, SD. Two Water Rights (No. 4493-3 and 6070-3) appropriate 4.9 cfs for mine dewatering at Spencer Quarry. In addition to appropriative rights, there are a number of domestic use wells on file with the DENR-Water Rights Program.

Table 1. Uses per water rights/permits appropriating water from the Sioux Quartzite aquifer (Water Rights, 2017a)

Use	Number of Permits/Rights
Commercial	16
Domestic	1
Geothermal	6
Industrial	4
Institutional	1
Irrigation	8
Municipal	17
Recreation	2
Suburban Housing Development	3

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 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.

WATER AVAILABILITY:

This application proposes to appropriate water from the Sioux Quartzite aquifer at a rate of 0.11 cfs. If this application is approved, average annual water use will likely be less than 40 acre-feet annually (ac-ft/yr).

The wells that this application proposes to use were constructed October 30, 2014, and September 16, 2015, respectively. Water meters were installed to quantify groundwater use at this swine confinement facility and records are submitted to the Chief Engineer. The daily water use records have been summarized on a monthly basis and are presented in Table 2. In 2016, the facility reported using 12,285,050 gallons of water (38 ac-ft) from the wells. By way of comparison, maximum reasonable domestic use (i.e. 18 gpm continuously) would equate to approximately 29 ac-ft/yr. The facility now has a connection with TM Rural Water District, so future use from the wells may be less.

Table 2. Water use reported from wells at Thunder Ridge.¹

Month	Water Use (gallons)
Sep-15	405,100
Oct-15	463,700
Nov-15	447,700
Dec-15	561,200
Jan-16	800,800
Feb-16	792,400
Mar-16	945,500
Apr-16	855,600
May-16	853,700
Jun-16	1,329,000
Jul-16	1,442,500
Aug-16	1,326,300
Sep-16	1,108,900
Oct-16	1,111,200
Nov-16	830,800
Dec-16	888,350
<i>Minimum</i>	<i>405,100</i>
<i>Maximum</i>	<i>1,442,500</i>
<i>Average</i>	<i>885,172</i>

With the exception of December 2016, the facility has relied solely on well water for its water needs. There have been no problems with the capacity of the wells to meet the facilities demands, the production of the wells has not noticeably declined, and there have been no problems with the wells pumping dry (Woerner, 2017). The 16 months of withdrawals attest to the viability of the Sioux Quartzite aquifer in this project area.

EXISTING WATER RIGHTS/PERMITS

Unlawful impairment of wells in the Sioux Quartzite:

There are no water rights/permits appropriating water from the Sioux Quartzite aquifer within approximately eight miles of this project site. The nearest appropriation from the Sioux Quartzite aquifer is Water Right No. 5466-3, for the Town of Monroe. Residences of the Town of Monroe currently receive water from individual connections to TM Rural Water District (Friedeman, 2017). If the municipal wells have not been abandoned, they are maintained for fire protection purposes. The water right authorizes diversion points approximately 8.5 miles east of this proposed project site. The DENR-Water Rights Program has records of two domestic wells that are possibly completed into the Sioux Quartzite aquifer within approximately five

¹ On March 3, 2016, the Chief Engineer issued an order to Thunder Ridge RE, LLC. to limit the use of groundwater to reasonable domestic use. The Chief Engineer notified Thunder Ridge RE, LLC. on August 12, 2016, that the Department of Environment and Natural Resources was taking an enforcement action due to Thunder Ridge using water in excess of reasonable domestic use. The enforcement action included a settlement agreement in which Thunder Ridge agreed to: a) comply with the order to limit groundwater use to reasonable domestic use; and b) pay \$15,600 to the DENR in settlement of DENR's civil penalty against Thunder Ridge.

miles of the project area (see Table 3). The DENR-Water Rights Program has not received any complaints regarding this existing water use.

Table 3. Domestic wells on file with the DENR-Water Rights Program, potentially completed into the Sioux Quartzite aquifer, within approximately five miles of the project area proposed by this application (Water Rights, 2017b)

Owner at time of construction	Completion date	Approximate direction and distance from 8068-3
Nick Ortman	10/02/2014	2.5 miles northeast
Tommy Thomas	08/05/1981	0.87 miles south

Since SDCL 46-2A-9 requires that a permit to appropriate water may only be issued if the proposed diversion can be developed without unlawful impairment of existing rights, consideration must be giving to what constitutes unlawful impairment or an adverse impact.

The Water Management Board rule (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”

The rules do not identify what constitutes an adverse impact to a prior appropriator. The Board has however promulgated rules pursuant to SDCL 46-6-6.1 that regulate large capacity wells with the intent of maintaining an adequate depth of water for prior appropriators and providing for the lowering of the pump in prior appropriator’s wells.

One of the principal Board rules addressing SDCL 46-6-6.1 is ARSD 74:02:05:02, which requires that the spacing of large capacity wells is to be controlled to assure domestic use and other prior water right water supplies in adequate wells. An adequate well is defined by ARSD 74:02:04:20(6) as:

“a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet;”

Although 20 feet is an adequate depth of water for prior appropriators in most aquifers, in the Sioux Quartzite aquifer, 20 feet is seldom a sufficient depth of water to be a dependable supply for a well. Defining adverse interference issues in the Sioux Quartzite aquifer is further complicated by the fact that unlike the case of most other aquifers where the maximum drawdown that could result from pumping a large capacity well is limited by the aquifer thickness, in the quartzite aquifer the maximum drawdown is limited by the well depth.

Therefore, in assessing if well interference is an adverse impairment, provided the affected well is adequate, the depth of the affected well must also be taken into consideration. Although depth

is a critical factor in a well's ability to tolerate interference in the Sioux Quartzite, minimum well depth is not regulated.

Even though minimum well depth is not dictated by statute or rule, ARSD 74:02:04:60 does specify the requirements for the installation of pumps in wells. The rule requires that the depth of the pump setting shall be determined by dividing the specific capacity determined for the well into the required yield and adding at least 10 additional feet. Obviously the minimum depth of the pump setting as determined by ARSD 74:02:04:60 could be used as a quasi-minimum well depth standard. For example, the bottom of a well with a specific capacity of 1 gallon per minute per foot of drawdown (gpm/ft), permitted for 20 gallons per minute (gpm), would need to be at least 30 below the static water level; and the bottom of a well with a specific capacity of 0.5 gpm/ft, permitted for 20 gpm, would need to be at least 50 feet deeper than the static water level.

If the depth of a well allows for pump placement per ARSD 74:02:04:60 and interference requires the well be deepened, that interference could be considered an adverse impact. Conversely, 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 an adverse impact. It is important to note that unlike the standard definition of an adequate well, the pump installation standard does not fix the setting to the static water level or the specific capacity at the time of construction. The pump setting and ultimately the depth of a well must be able to accommodate for seasonal and climatic fluctuations of the static water level and/or a change of the well's specific capacity.

In a well interference situation involving the Sioux Quartzite, the static water level and specific capacity would be used to determine the minimum (i.e. highest) pump setting for the affected well. After allowing for seasonal and climatic conditions, well interference that caused the pump to be lowered below the calculated pump setting would be unlawful impairment.

With that said, if this application is approved, well interference is not expected to be adverse to existing wells due to the distance between wells and the relatively low diversion rate proposed by this application.

CONCLUSIONS:

1. Two wells completed into the Sioux Quartzite have been used by the applicant since December 2014.
2. The Sioux Quartzite is a viable aquifer in this area.
3. The Sioux Quartzite is under confined/artesian conditions in this area.
4. Recharge to the Sioux Quartzite aquifer is through infiltration of precipitation and leakage from several adjacent aquifers.
5. Average annual recharge has not been quantified for the Sioux Quartzite aquifer.
6. The DENR-Water Rights Program does not monitor any observation wells completed into the Sioux Quartzite aquifer.
7. There is a reasonable probability that approval of this application will not cause withdrawals from the aquifer to exceed average annual recharge to the aquifer.
8. Unlawful impairment in the Sioux Quartzite aquifer can be considered drawdown to the extent that an affected well that is both adequate pursuant to ARSD 74:02:04:20(7) and

allows for a pump setting pursuant to ARSD 74:02:04:60 experiences a loss of water production or increased operating expense that can be attributed to another well.

9. The nearest well owned by others, supplied from the Sioux Quartzite aquifer, recorded with the DENR-Water Rights Program, is located approximately 0.87 miles south of this project area.
10. Well interference if this application is approved is not expected to be adverse.



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

Baldwin, B, 1949, A Preliminary Report on the Sioux Quartzite: South Dakota Geological Survey Report of Investigations 063, 34 p.

Buhler, K.A., 2015, Report to the Chief Engineer on Water Permit Application No. 8068-3 Thunder Ridge RE, LLC., January 3, 2015, South Dakota DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Friedeman, Barbara. "RE: the Town of Monroe." Message to the author. 27 Jan. 2017. E-mail.

Iles, Derric L. "Water Right permit 8068-3." Message to Jeanne M. Goodman. 11 Jan. 2017. E-mail.

Gries, J.P., 1983, Geometry and Stratigraphic Relations of the Sioux Quartzite: Proceedings of the South Dakota Academy of Science, v. 62, p. 64-74.

McCormick, K.A., 2010, Elevation Contour Map of the Precambrian surface of South Dakota: South Dakota Geological Survey General Map 11 Sioux Ridge Inset, scale 1:160,000

Schulz, L.D., 1991 Investigation of the Basal Outwash in the Dolton Vicinity: South Dakota Geological Survey Open-File Report 64-UR, 33 p. 11 figs. 4 tables, 2 app.

Water Rights Program, 2017a, "Observation Well Data", South Dakota DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights Program, 2017b, "Water Permit/Right Files", South Dakota DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights Program, 2017c, "Well Completion Report Files", South Dakota DENR-Water Rights Program, Joe Foss Building, Pierre, SD



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.**

February 3, 2017

Dr. Luke Minion
Thunder Ridge RE LLC
PO Box 188
Pipestone MN 56164

Dear Dr. Minion:

Water Permit Application No. 8068-3 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 New Era printed at Parker SD and the Argus Leader printed at Sioux Falls SD. The Water Rights Program is paying for the cost of the publication. 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.

The publisher has been instructed to publish the notice on February 9, 2017. 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.

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, February 06, 2017 8:08 AM
To: allegals@argusleader.com
Subject: FW: 8068-3, Thunder Ridge RE LLC
Attachments: 8068-3public.wmb1.docx; FORM8.FRM.doc

I send this notice on Friday. Please publish as stated on February 9.

The Water Rights Program will be responsible for payment, not Thunder Ridge. Please send us the affidavit and bill immediately.

Thanks,
Karen

From: Schlaak, Karen
Sent: Friday, February 03, 2017 2:18 PM
To: allegals@argusleader.com
Subject: 8068-3, Thunder Ridge RE LLC

Attached is a notice to be published on February 9, 2017.

Thunder Ridge RE LLC, c/o Luke Minion, 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.

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

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, February 06, 2017 8:07 AM
To: sebeling@ncppub.com
Subject: FW: 8068-3, Thunder Ridge RE LLC
Attachments: 8068-3public.wmb1.docx; FORM8.FRM.doc

I send this notice on Friday. Please publish as stated on February 9.

The Water Rights Program will be responsible for payment, not Thunder Ridge. Please send us the affidavit and bill immediately.

Thanks,
Karen

From: Schlaak, Karen
Sent: Friday, February 03, 2017 2:17 PM
To: sebeling@ncppub.com
Subject: 8068-3, Thunder Ridge RE LLC

Attached is a notice to be published on February 9, 2017.

Thunder Ridge RE LLC, c/o Luke Minion, 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.

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

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352

Instruction to Newspaper – Publish the Notice on February 9, 2017. The Water Rights Program is responsible for payment.

NOTICE OF HEARING ON APPLICATION NO. 8068-3

Notice is given that Thunder Ridge RE, LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone MN 56164 filed an application for a water permit to appropriate 0.11 cubic feet of water per second from two wells (272 and 306 feet deep) to be completed into the Sioux Quartzite aquifer located in the N 1/2 NE 1/4 Section 19, T100N, R55W for commercial use in a swine confinement facility.

The application was deferred by the Water Management Board on March 4, 2015, to allow for further review of the water source. This notice of hearing is being published again to reflect the water source is the Sioux Quartzite aquifer instead of the Sioux Quartzite Wash aquifer and the Chief Engineer's recommendation is for approval.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8068-3 with qualifications including an annual volume limitation of 46 acre feet of water annually 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.

The Water Management Board will consider this application at 11:00 a.m. on March 1, 2017 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 21, 2017.

The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The March 1, 2017 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by February 21, 2017. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

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Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at an approximate cost of _____.

RECEIVED

FEB 13 2017

WATER RIGHTS
PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF TURNER

I, Dawn Rye, of the City of Parker, County of Turner, State of South Dakota being first duly sworn on oath, deposes and says: The New Era is a weekly legal newspaper of general circulation, printed and published in the City of Parker, in said County of Turner, by The New-Era, New Century Press, publishers, and has been such legal newspaper during the times hereinafter mentioned; that the said newspaper 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 publication of the notice hereunto attached, and has during all of said time had, and now has, more than 200 bona fide subscribers; that the undersigned, The affiant, is the Office Manager of the said newspaper, in charge of the advertisement department thereof and has personal knowledge of all the facts stated in this affidavit and the advertisement headed:

N0209-4 Hearing Application 8026-3

one printed copy of hereto attached, is printed and published in the said newspaper for one successive week, one each week and on the same day of the week, on the following dates, to wit:

On Thursday, the 9th day of February 2017

That \$70.34 being the full amount of the fees for publication of the attached notices insures solely for the benefits of the publishers 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.

Dawn Rye

Subscribed and sworn to before me this 9th

Day of February 2017

Paul R Harms

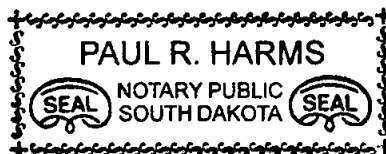
Notary Public, Turner County, South Dakota

My Commission Expires: March 20, 2018

Publication Fee \$70.34

Notary Fees \$

Total \$70.34



**Notice of hearing on
application No. 8068-3**

Notice is given that Thunder Ridge RE, LLC, c/o Dr. Luke Minion, PO Box 188, Pipestone MN 56164 filed an application for a water permit to appropriate 0.11 cubic feet of water per second from two wells (272 and 306 feet deep) to be completed into the Sioux Quartzite aquifer located in the N 1/2 NE 1/4 Section 19, T100N, R55W for commercial use in a swine confinement facility.

The application was deferred by the Water Management Board on March 4, 2015, to allow for further review of the water source. This notice of hearing is being published again to reflect the water source is the Sioux Quartzite aquifer instead of the Sioux Quartzite Wash aquifer and the Chief Engineer's recommendation is for approval.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8068-3 with qualifications including an annual volume limitation of 46 acre feet of water annually 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.

The Water Management Board will consider this application at 11:00 a.m. on March 1, 2017 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 21, 2017.

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

Published once at an approximate cost of \$70.34

(N0209-4)

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FEB 13 2017

WATER RIGHTS
PROGRAM

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Fax: 712-472-3414

URL: <http://www.ncppub.com>

WATER RIGHTS PROGRAM
523 E CAPITOL
PIERRE, SD 57501

Acct. #: 00008154

Phone #: (605)773-3352

Date: 02/9/2017

Due Date: 03/27/2017

Invoice #: 300151409

PO #:

Salesperson:

Ad Taker: 0030

Ad #	Description	Publication	Run Date	Amount	Due
00062512	N0209-4 - Hearing App 8026-3	D	02/9/2017	70.34	70.34

The New Era

Thank you for your business.

Please return a copy with payment

Total Due

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February 13, 2017

PAYMENT REQUEST FORM

PAYEE: New Century Press
PO Box 28
Rock Rapids IA 51246

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

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Hearing Notice for Thunder Ridge – Permit No. 8068-3 # 300151409

AMOUNT: \$70.34

FUNDING SOURCE:

GENERAL: X

FEDERAL:

OTHER:

COMMENTS:

AUTHORIZATION:

 2-13-17

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct. I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued thereunder relating to nondiscrimination in federal assisted programs.

Woerner, Bradley S. "FW: Thunder Ridge RE, LLC." Message to the author. 02 Feb. 2017. E-mail.

CUSTOMER NUMBER:	78306	Argus Leader P.O. Box 677349, Dallas, TX 75267-7349
INVOICE NUMBER:	1910746	
RUN DATES:	2/9, 2017	
		AMOUNT DUE: \$128.94

Attn: Karen Schlaak
 Water Rights Program
 523 E. Capital
 Jose Foss Building
 Pierre, SD 57501-0000

RECEIVED
FEB 13 2017
WATER RIGHTS
PROGRAM

DETACH THIS STUB AND RETURN WITH PAYMENT

PAYMENT DUE UPON RECEIPT

Thunder Ridge W

AFFIDAVIT OF PUBLICATION-

Customer Number: 78306 523 E. Capital
 Invoice Number: 902065

Argus Leader AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA } ss

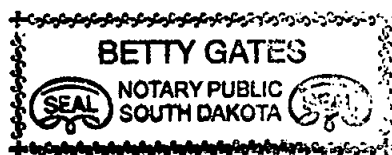
Sara Kruse being duly sworn, says: That The **Argus Leader** is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-2.1, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

Thursday, the 9 day of February 2017,
 _____, the _____ day of _____ 2017,
 _____, the _____ day of _____ 2017,
 _____, the _____ day of _____ 2017,
 _____, the _____ day of _____ 2017,
 _____, the _____ day of _____ 2017,
 _____, the _____ day of _____ 2017,

and that \$128.94 was charged for publishing the same

Sara Kruse
 Subscribed and sworn to before me 2/9/17

Betty Gates
 Notary Public, South Dakota



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46-6-3.45, 46-6-3.46, 46-6-3.47, 46-6-3.48, 46-6-3.49, 46-6-3.50, 46-6-3.51, 46-6-3.52, 46-6-3.53, 46-6-3.54, 46-6-3.55, 46-6-3.56, 46-6-3.57, 46-6-3.58, 46-6-3.59, 46-6-3.60, 46-6-3.61, 46-6-3.62, 46-6-3.63, 46-6-3.64, 46-6-3.65, 46-6-3.66, 46-6-3.67, 46-6-3.68, 46-6-3.69, 46-6-3.70, 46-6-3.71, 46-6-3.72, 46-6-3.73, 46-6-3.74, 46-6-3.75, 46-6-3.76, 46-6-3.77, 46-6-3.78, 46-6-3.79, 46-6-3.80, 46-6-3.81, 46-6-3.82, 46-6-3.83, 46-6-3.84, 46-6-3.85, 46-6-3.86, 46-6-3.87, 46-6-3.88, 46-6-3.89, 46-6-3.90, 46-6-3.91, 46-6-3.92, 46-6-3.93, 46-6-3.94, 46-6-3.95, 46-6-3.96, 46-6-3.97, 46-6-3.98, 46-6-3.99, 46-6-4.1, 46-6-4.2, 46-6-4.3, 46-6-4.4, 46-6-4.5, 46-6-4.6, 46-6-4.7, 46-6-4.8, 46-6-4.9, 46-6-4.10, 46-6-4.11, 46-6-4.12, 46-6-4.13, 46-6-4.14, 46-6-4.15, 46-6-4.16, 46-6-4.17, 46-6-4.18, 46-6-4.19, 46-6-4.20, 46-6-4.21, 46-6-4.22, 46-6-4.23, 46-6-4.24, 46-6-4.25, 46-6-4.26, 46-6-4.27, 46-6-4.28, 46-6-4.29, 46-6-4.30, 46-6-4.31, 46-6-4.32, 46-6-4.33, 46-6-4.34, 46-6-4.35, 46-6-4.36, 46-6-4.37, 46-6-4.38, 46-6-4.39, 46-6-4.40, 46-6-4.41, 46-6-4.42, 46-6-4.43, 46-6-4.44, 46-6-4.45, 46-6-4.46, 46-6-4.47, 46-6-4.48, 46-6-4.49, 46-6-4.50, 46-6-4.51, 46-6-4.52, 46-6-4.53, 46-6-4.54, 46-6-4.55, 46-6-4.56, 46-6-4.57, 46-6-4.58, 46-6-4.59, 46-6-4.60, 46-6-4.61, 46-6-4.62, 46-6-4.63, 46-6-4.64, 46-6-4.65, 46-6-4.66, 46-6-4.67, 46-6-4.68, 46-6-4.69, 46-6-4.70, 46-6-4.71, 46-6-4.72, 46-6-4.73, 46-6-4.74, 46-6-4.75, 46-6-4.76, 46-6-4.77, 46-6-4.78, 46-6-4.79, 46-6-4.80, 46-6-4.81, 46-6-4.82, 46-6-4.83, 46-6-4.84, 46-6-4.85, 46-6-4.86, 46-6-4.87, 46-6-4.88, 46-6-4.89, 46-6-4.90, 46-6-4.91, 46-6-4.92, 46-6-4.93, 46-6-4.94, 46-6-4.95, 46-6-4.96, 46-6-4.97, 46-6-4.98, 46-6-4.99, 46-6-5.1, 46-6-5.2, 46-6-5.3, 46-6-5.4, 46-6-5.5, 46-6-5.6, 46-6-5.7, 46-6-5.8, 46-6-5.9, 46-6-5.10, 46-6-5.11, 46-6-5.12, 46-6-5.13, 46-6-5.14, 46-6-5.15, 46-6-5.16, 46-6-5.17, 46-6-5.18, 46-6-5.19, 46-6-5.20, 46-6-5.21, 46-6-5.22, 46-6-5.23, 46-6-5.24, 46-6-5.25, 46-6-5.26, 46-6-5.27, 46-6-5.28, 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46-6-6.21, 46-6-6.22, 46-6-6.23, 46-6-6.24, 46-6-6.25, 46-6-6.26, 46-6-6.27, 46-6-6.28, 46-6-6.29, 46-6-6.30, 46-6-6.31, 46-6-6.32, 46-6-6.33, 46-6-6.34, 46-6-6.35, 46-6-6.36, 46-6-6.37, 46-6-6.38, 46-6-6.39, 46-6-6.40, 46-6-6.41, 46-6-6.42, 46-6-6.43, 46-6-6.44, 46-6-6.45, 46-6-6.46, 46-6-6.47, 46-6-6.48, 46-6-6.49, 46-6-6.50, 46-6-6.51, 46-6-6.52, 46-6-6.53, 46-6-6.54, 46-6-6.55, 46-6-6.56, 46-6-6.57, 46-6-6.58, 46-6-6.59, 46-6-6.60, 46-6-6.61, 46-6-6.62, 46-6-6.63, 46-6-6.64, 46-6-6.65, 46-6-6.66, 46-6-6.67, 46-6-6.68, 46-6-6.69, 46-6-6.70, 46-6-6.71, 46-6-6.72, 46-6-6.73, 46-6-6.74, 46-6-6.75, 46-6-6.76, 46-6-6.77, 46-6-6.78, 46-6-6.79, 46-6-6.80, 46-6-6.81, 46-6-6.82, 46-6-6.83, 46-6-6.84, 46-6-6.85, 46-6-6.86, 46-6-6.87, 46-6-6.88, 46-6-6.89, 46-6-6.90, 46-6-6.91, 46-6-6.92, 46-6-6.93, 46-6-6.94, 46-6-6.95, 46-6-6.96, 46-6-6.97, 46-6-6.98, 46-6-6.99, 46-6-7.1, 46-6-7.2, 46-6-7.3, 46-6-7.4, 46-6-7.5, 46-6-7.6, 46-6-7.7, 46-6-7.8, 46-6-7.9, 46-6-7.10, 46-6-7.11, 46-6-7.12, 46-6-7.13, 46-6-7.14, 46-6-7.15, 46-6-7.16, 46-6-7.17, 46-6-7.18, 46-6-7.19, 46-6-7.20, 46-6-7.21, 46-6-7.22, 46-6-7.23, 46-6-7.24, 46-6-7.25, 46-6-7.26, 46-6-7.27, 46-6-7.28, 46-6-7.29, 46-6-7.30, 46-6-7.31, 46-6-7.32, 46-6-7.33, 46-6-7.34, 46-6-7.35, 46-6-7.36, 46-6-7.37, 46-6-7.38, 46-6-7.39, 46-6-7.40, 46-6-7.41, 46-6-7.42, 46-6-7.43, 46-6-7.44, 46-6-7.45, 46-6-7.46, 46-6-7.47, 46-6-7.48, 46-6-7.49, 46-6-7.50, 46-6-7.51, 46-6-7.52, 46-6-7.53, 46-6-7.54, 46-6-7.55, 46-6-7.56, 46-6-7.57, 46-6-7.58, 46-6-7.59, 46-6-7.60, 46-6-7.61, 46-6-7.62, 46-6-7.63, 46-6-7.64, 46-6-7.65, 46-6-7.66, 46-6-7.67, 46-6-7.68, 46-6-7.69, 46-6-7.70, 46-6-7.71, 46-6-7.72, 46-6-7.73, 46-6-7.74, 46-6-7.75, 46-6-7.76, 46-6-7.77, 46-6-7.78, 46-6-7.79, 46-6-7.80, 46-6-7.81, 46-6-7.82, 46-6-7.83, 46-6-7.84, 46-6-7.85, 46-6-7.86, 46-6-7.87, 46-6-7.88, 46-6-7.89, 46-6-7.90, 46-6-7.91, 46-6-7.92, 46-6-7.93, 46-6-7.94, 46-6-7.95, 46-6-7.96, 46-6-7.97, 46-6-7.98, 46-6-7.99, 46-6-8.1, 46-6-8.2, 46-6-8.3, 46-6-8.4, 46-6-8.5, 46-6-8.6, 46-6-8.7, 46-6-8.8, 46-6-8.9, 46-6-8.10, 46-6-8.11, 46-6-8.12, 46-6-8.13, 46-6-8.14, 46-6-8.15, 46-6-8.16, 46-6-8.17, 46-6-8.18, 46-6-8.19, 46-6-8.20, 46-6-8.21, 46-6-8.22, 46-6-8.23, 46-6-8.24, 46-6-8.25, 46-6-8.26, 46-6-8.27, 46-6-8.28, 46-6-8.29, 46-6-8.30, 46-6-8.31, 46-6-8.32, 46-6-8.33, 46-6-8.34, 46-6-8.35, 46-6-8.36, 46-6-8.37, 46-6-8.38, 46-6-8.39, 46-6-8.40, 46-6-8.41, 46-6-8.42, 46-6-8.43, 46-6-8.44, 46-6-8.45, 46-6-8.46, 46-6-8.47, 46-6-8.48, 46-6-8.49, 46-6-8.50, 46-6-8.51, 46-6-8.52, 46-6-8.53, 46-6-8.54, 46-6-8.55, 46-6-8.56, 46-6-8.57, 46-6-8.58, 46-6-8.59, 46-6-8.60, 46-6-8.61, 46-6-8.62, 46-6-8.63, 46-6-8.64, 46-6-8.65, 46-6-8.66, 46-6-8.67, 46-6-8.68, 46-6-8.69, 46-6-8.70, 46-6-8.71, 46-6-8.72, 46-6-8.73, 46-6-8.74, 46-6-8.75, 46-6-8.76, 46-6-8.77, 46-6-8.78, 46-6-8.79, 46-6-8.80, 46-6-8.81, 46-6-8.82, 46-6-8.83, 46-6-8.84, 46-6-8.85, 46-6-8.86, 46-6-8.87, 46-6-8.88, 46-6-8.89, 46-6-8.90, 46-6-8.91, 46-6-8.92, 46-6-8.93, 46-6-8.94, 46-6-8.95, 46-6-8.96, 46-6-8.97, 46-6-8.98, 46-6-8.99, 46-6-9.1, 46-6-9.2, 46-6-9.3, 46-6-9.4, 46-6-9.5, 46-6-9.6, 46-6-9.7, 46-6-9.8, 46-6-9.9, 46-6-9.10, 46-6-9.11, 46-6-9.12, 46-6-9.13, 46-6-9.14, 46-6-9.15, 46-6-9.16, 46-6-9.17, 46-6-9.18, 46-6-9.19, 46-6-9.20, 46-6-9.21, 46-6-9.22, 46-6-9.23, 46-6-9.24, 46-6-9.25, 46-6-9.26, 46-6-9.27, 46-6-9.28, 46-6-9.29, 46-6-9.30, 46-6-9.31, 46-6-9.32, 46-6-9.33, 46-6-9.34, 46-6-9.35, 46-6-9.36, 46-6-9.37, 46-6-9.38, 46-6-9.39, 46-6-9.40, 46-6-9.41, 46-6-9.42, 46-6-9.43, 46-6-9.44, 46-6-9.45, 46-6-9.46, 46-6-9.47, 46-6-9.48, 46-6-9.49, 46-6-9.50, 46-6-9.51, 46-6-9.52, 46-6-9.53, 46-6-9.54, 46-6-9.55, 46-6-9.56, 46-6-9.57, 46-6-9.58, 46-6-9.59, 46-6-9.60, 46-6-9.61, 46-6-9.62, 46-6-9.63, 46-6-9.64, 46-6-9.65, 46-6-9.66, 46-6-9.67, 46-6-9.68, 46-6-9.69, 46-6-9.70, 46-6-9.71, 46-6-9.72, 46-6-9.73, 46-6-9.74, 46-6-9.75, 46-6-9.76, 46-6-9.77, 46-6-9.78, 46-6-9.79, 46-6-9.80, 46-6-9.81, 46-6-9.82, 46-6-9.83, 46-6-9.84, 46-6-9.85, 46-6-9.86, 46-6-9.87, 46-6-9.88, 46-6-9.89, 46-6-9.90, 46-6-9.91, 46-6-9.92, 46-6-9.93, 46-6-9.94, 46-6-9.95, 46-6-9.96, 46-6-9.97, 46-6-9.98, 46-6-9.99, 46-6-10.1, 46-6-10.2, 46-6-10.3, 46-6-10.4, 46-6-10.5, 46-6-10.6, 46-6-10.7, 46-6-10.8, 46-6-10.9, 46-6-10.10, 46-6-10.11, 46-6-10.12, 46-6-10.13, 46-6-10.14, 46-6-10.15, 46-6-10.16, 46-6-10.17, 46-6-10.18, 46-6-10.19, 46-6-10.20, 46-6-10.21, 46-6-10.22, 46-6-10.23, 46-6-10.24, 46-6-10.25, 46-6-10.26, 46-6-10.27, 46-6-10.28, 46-6-10.29, 46-6-10.30, 46-6-10.31, 46-6-10.32, 46-6-10.33, 46-6-10.34, 46-6-10.35, 46-6-10.36, 46-6-10.37, 46-6-10.38, 46-6-10.39, 46-6-10.40, 46-6-10.41, 46-6-10.42, 46-6-10.43, 46-6-10.44, 46-6-10.45, 46-6-10.46, 46-6-10.47, 46-6-10.48, 46-6-10.49, 46-6-10.50, 46-6-10.51, 46-6-10.52, 46-6-10.53, 46-6-10.54, 46-6-10.55, 46-6-10.56, 46-6-10.57, 46-6-10.58, 46-6-10.59, 46-6-10.60, 46-6-10.61, 46-6-10.62, 46-6-10.63, 46-6-10.64, 46-6-10.65, 46-6-10.66, 46-6-10.67, 46-6-10.68, 46-6-10.69, 46-6-10.70, 46-6-10.71, 46-6-10.72, 46-6-10.73, 46-6-10.74, 46-6-10.75, 46-6-10.76, 46-6-10.77, 46-6-10.78, 46-6-10.79, 46-6-10.80, 46-6-10.81, 46-6-10.82, 46-6-10.83, 46-6-10.84, 46-6-10.85, 46-6-10.86, 46-6-10.87, 46-6-10.88, 46-6-10.89, 46-6-10.90, 46-6-10.91, 46-6-10.92, 46-6-10.93, 46-6-10.94, 46-6-10.95, 46-6-10.96, 46-6-10.97, 46-6-10.98, 46-6-10.99, 46-6-11.1, 46-6-11.2, 46-6-11.3, 46-6-11.4, 46-6-11.5, 46-6-11.6, 46-6-11.7, 46-6-11.8, 46-6-11.9, 46-6-11.10, 46-6-11.11, 46-6-11.12, 46-6-11.13, 46-6-11.14, 46-6-11.15, 46-6-11.16, 46-6-11.17, 46-6-11.18, 46-6-11.19, 46-6-11.20, 46-6-11.21, 46-6-11.22, 46-6-11.23, 46-6-11.24, 46-6-11.25, 46-6-11.26, 46-6-11.27, 46-6-11.28, 46-6-11.29, 46-6-11.30, 46-6-11.31, 46-6-11.32, 46-6-11.33, 46-6-11.34, 46-6-11.35, 46-6-11.36, 46-6-11.37, 46-6-11.38, 46-6-11.39, 46-6-11.40, 46-6-11.41, 46-6-11.42, 46-6-11.43, 46-6-11.44, 46-6-11.45, 46-6-11.46, 46-6-11

February 13, 2017

PAYMENT REQUEST FORM

PAYEE: Argus Leader
PO Box 677349
Dallas TX 75267

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

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Hearing Notice for Thunder Ridge – Permit No. 8068-3 # 1910746

AMOUNT: \$128.94

FUNDING SOURCE:

GENERAL: X

FEDERAL:

OTHER:

COMMENTS:

AUTHORIZATION:

 2-13-17

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct. I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued thereunder relating to nondiscrimination in federal assisted programs.

Application No. 8068-3

Water Rights Program - DENR Conversation File Documentation

NAME OF PERSON OR FILE: Thunder Ridge RE, Inc – Application No. 8068-3

ADDRESS: PO Box 188, Pipestone MN 56164 COUNTY: Turner County

DATE: February 27, 2017 TELEPHONE:

RE: Call to Brian Rolling (605) 421-1166

Representative Kyle Schoenfish sent an email to DENR regarding concerns he received from constituent Brian Rolling regarding the Thunder Ridge application.

I contacted Mr. Rolling to discuss the application filed by Thunder Ridge that has been deferred for two years. Mr. Rolling had reviewed the past Board minutes when this application was deferred so he was knowledgeable about the application.

Mr. Rolling stated that he was a shareholder in Thunder Ridge. He knew that DENR had taken enforcement action for the facility using more than reasonable domestic use without having a permit in place. That caused Thunder Ridge to go through the expense to connect to TM Rural Water for supplemental water. He questioned the logic of Thunder Ridge being required to connect to rural water when the wells for the facility and those for rural water are all from the same water source. I sensed that he thought DENR was giving preferential treatment to the rural water system by forcing Thunder Ridge to use rural water. I stated that TM Rural Water had wells completed into the Dolton aquifer and Upper Vermillion Missouri aquifer. The water source identified as being the source for completed wells serving Thunder Ridge is the Sioux Quartzite. Based on this Mr. Rolling seemed satisfied with the actions that had taken place. He understood if the water permit application for Thunder Ridge which is up for consideration on March 1, 2017 is approved, it will become a business decision by Thunder Ridge as to what extent they use their wells and/or supplement with rural water.

We had a brief discussion on TM Rural Water's existing rights and how they are quantified on both a diversion "pump" rate and an annual volume.

NAME: Eric Henderson



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

MAR 08 2017

Thunder Ridge RE LLC
Dr. Luke Minion
PO Box 188
Pipestone MN 56164

Dear Dr. Minion:

Enclosed is Water Permit No. 8068-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

8068-3
RECEIVED

MAR 20 2017

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE

Date

3/15/17

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

FROM:

Thunder Ridge RE LLC

(name)

P.O. Box 188

(address)

Pipestone, MN 56164

(city, state, zip)

507 825 4211
(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. 8068-3 states that the water use system is to be constructed by

March 1, 2022
(date)

, and water is to be put to beneficial use by

March 1, 2026
(date)

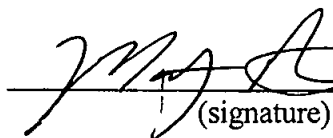
The water use system was completed on

3/15/17
(date)

Applying the water to beneficial use was completed on

3/15/17
(date)

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


(signature)**MARTY ROST**

Swine Specialist



7-98

1300 South Highway 75, PO Box 188
Pipestone, MN 56164

Phone: 507.825.7029
Mobile: 507.215.0482

mrost@pipevet.com



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

March 22, 2017

8068-3

Marty Rost
Thunder Ridge RE LLC
PO Box 188
Pipestone MN 56164

Dear Mr. Rost:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with the water use system authorized under Water Permit No. 8068-3.

The system is 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 the completion of your project and the staff inspection has no bearing on your water permit.

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 black ink that reads "Genny McMath".

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

Thunder Ridge, LLC Well Tracking Form

East Well

Date	Reading	Use in Gallons
02/28/2017	5,860,800	
03/01/2017	5,870,300	9,500
03/02/2017	5,880,000	9,700
03/03/2017	5,889,100	9,100
03/04/2017	5,897,800	8,700
03/05/2017	5,908,000	10,200
03/06/2017	5,917,400	9,400
03/07/2017	5,926,800	9,400
03/08/2017	5,935,900	9,100
03/09/2017	5,944,600	8,700
03/10/2017	5,954,500	9,900
03/11/2017	5,964,200	9,700
03/12/2017	5,974,300	10,100
03/13/2017	5,984,000	9,700
03/14/2017	5,992,600	8,600
03/15/2017	6,002,100	9,500
03/16/2017	6,012,100	10,000
03/17/2017	6,021,700	9,600
03/18/2017	6,030,800	9,100
03/19/2017	6,040,300	9,500
03/20/2017	6,049,200	8,900
03/21/2017	6,059,000	9,800
03/22/2017	6,068,400	9,400
03/23/2017	6,077,500	9,100
03/24/2017	6,087,800	10,300
03/25/2017	6,097,200	9,400
03/26/2017	6,105,900	8,700
03/27/2017	6,115,300	9,400
03/28/2017	6,124,800	9,500
03/29/2017	6,134,000	9,200
03/30/2017	6,143,400	9,400
03/31/2017	6,152,900	9,500

West Well

Date	Reading	Use
02/28/2017	9,323,900	
03/01/2017	9,338,400	14,500
03/02/2017	9,352,400	14,000
03/03/2017	9,367,400	15,000
03/04/2017	9,382,500	15,100
03/05/2017	9,396,700	14,200
03/06/2017	9,410,900	14,200
03/07/2017	9,425,500	14,600
03/08/2017	9,440,300	14,800
03/09/2017	9,454,200	13,900
03/10/2017	9,469,300	15,100
03/11/2017	9,484,000	14,700
03/12/2017	9,498,200	14,200
03/13/2017	9,512,200	14,000
03/14/2017	9,526,100	13,900
03/15/2017	9,540,300	14,200
03/16/2017	9,555,200	14,900
03/17/2017	9,569,600	14,400
03/18/2017	9,584,700	15,100
03/19/2017	9,600,000	15,300
03/20/2017	9,614,000	14,000
03/21/2017	9,628,200	14,200
03/22/2017	9,642,900	14,700
03/23/2017	9,656,900	14,000
03/24/2017	9,671,300	14,400
03/25/2017	9,685,600	14,300
03/26/2017	9,700,000	14,400
03/27/2017	9,714,900	14,900
03/28/2017	9,730,200	15,300
03/29/2017	9,745,100	14,900
03/30/2017	9,759,900	14,800
03/31/2017	9,774,400	14,500

Rural Water

Date	Reading	Use
02/28/2017	1,644,354	
03/01/2017	1,652,900	8,546
03/02/2017	1,661,400	8,500
03/03/2017	1,669,400	8,000
03/04/2017	1,678,400	9,000
03/05/2017	1,687,900	9,500
03/06/2017	1,696,300	8,400
03/07/2017	1,704,700	8,400
03/08/2017	1,712,900	8,200
03/09/2017	1,721,400	8,500
03/10/2017	1,730,100	8,700
03/11/2017	1,738,600	8,500
03/12/2017	1,746,400	7,800
03/13/2017	1,755,900	9,500
03/14/2017	1,764,300	8,400
03/15/2017	1,772,800	8,500
03/16/2017	1,781,400	8,600
03/17/2017	1,789,400	8,000
03/18/2017	1,797,900	8,500
03/19/2017	1,806,100	8,200
03/20/2017	1,815,400	9,300
03/21/2017	1,824,500	9,100
03/22/2017	1,833,200	8,700
03/23/2017	1,841,500	8,300
03/24/2017	1,849,900	8,400
03/25/2017	1,858,300	8,400
03/26/2017	1,867,500	9,200
03/27/2017	1,875,300	7,800
03/28/2017	1,884,000	8,700
03/29/2017	1,893,700	9,700
03/30/2017	1,900,200	6,500
03/31/2017	1,905,278	5,078

Well water
use in
Gallons

Date	Gallons
02/28/2017	0
03/01/2017	24,000
03/02/2017	23,700
03/03/2017	24,100
03/04/2017	23,800
03/05/2017	24,400
03/06/2017	23,600
03/07/2017	24,000
03/08/2017	23,900
03/09/2017	22,600
03/10/2017	25,000
03/11/2017	24,400
03/12/2017	24,300
03/13/2017	23,700
03/14/2017	22,500
03/15/2017	23,700
03/16/2017	24,900
03/17/2017	24,000
03/18/2017	24,200
03/19/2017	24,800
03/20/2017	22,900
03/21/2017	24,000
03/22/2017	24,100
03/23/2017	23,100
03/24/2017	24,700
03/25/2017	23,700
03/26/2017	23,100
03/27/2017	24,300
03/28/2017	24,800
03/29/2017	24,100
03/30/2017	24,200
03/31/2017	24,000

Monthly Total 742,600

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Date	Reading	Use in Gallons
03/31/2017	6,152,900	
04/01/2017	6,152,900	0
04/02/2017	6,152,900	0
04/03/2017	6,152,900	0
04/04/2017	6,152,900	0
04/05/2017	6,152,900	0
04/06/2017	6,152,900	0
04/07/2017	6,152,900	0
04/08/2017	6,152,900	0
04/09/2017	6,152,900	0
04/10/2017	6,152,900	0
04/11/2017	6,152,900	0
04/12/2017	6,152,900	0
04/13/2017	6,152,900	0
04/14/2017	0	0
04/15/2017	12,500	12,500
04/16/2017	25,000	12,500
04/17/2017	37,500	12,500
04/18/2017	50,000	12,500
04/19/2017	62,500	12,500
04/20/2017	75,000	12,500
04/21/2017	87,500	12,500
04/22/2017	100,000	12,500
04/23/2017	112,500	12,500
04/24/2017	125,000	12,500
04/25/2017	137,500	12,500
04/26/2017	150,000	12,500
04/27/2017	162,500	12,500
04/28/2017	175,000	12,500
04/29/2017	187,500	12,500
04/30/2017	200,000	12,500

Reading	Use
9,774,400	
9,793,500	19,100
9,811,800	18,300
9,830,400	18,600
9,853,900	23,500
9,878,700	24,800
9,903,300	24,600
9,927,200	23,900
9,952,600	25,400
9,977,500	24,900
10,002,000	24,500
10,026,600	24,600
10,050,400	23,800
10,075,100	24,700
10,099,900	24,800
10,111,300	11,400
10,123,900	12,600
10,134,100	10,200
10,146,300	12,200
10,157,200	10,900
10,167,800	10,600
10,180,200	12,400
10,191,700	11,500
10,203,300	11,600
10,214,200	10,900
10,225,900	11,700
10,237,500	11,600
10,247,300	9,800
10,259,700	12,400
10,271,500	11,800
10,283,700	12,200

Reading	Use
1,905,300	
1,911,800	6,500
1,921,500	9,700
1,930,200	8,700
1,935,100	4,900
1,939,300	4,200
1,946,100	6,800
1,949,900	3,800
1,953,700	3,800
1,957,500	3,800
1,961,500	4,000
1,966,100	4,600
1,969,300	3,200
1,972,700	3,400
1,976,500	3,800
1,979,300	2,800
1,982,100	2,800
1,984,800	2,700
1,987,800	3,000
1,991,400	3,600
1,995,300	3,900
1,998,100	2,800
2,000,500	2,400
2,003,900	3,400
2,007,400	3,500
2,010,900	3,500
2,013,300	2,400
2,018,200	4,900
2,021,600	3,400
2,024,000	2,400
2,025,800	1,800

Well water

use in

Total Water

Date	Gallons	used
03/31/2017	0	0
04/01/2017	19,100	25,600
04/02/2017	18,300	28,000
04/03/2017	18,600	27,300
04/04/2017	23,500	28,400
04/05/2017	24,800	29,000
04/06/2017	24,600	31,400
04/07/2017	23,900	27,700
04/08/2017	25,400	29,200
04/09/2017	24,900	28,700
04/10/2017	24,500	28,500
04/11/2017	24,600	29,200
04/12/2017	23,800	27,000
04/13/2017	24,700	28,100
04/14/2017	24,800	28,600
04/15/2017	23,900	26,700
04/16/2017	25,100	27,900
04/17/2017	22,700	25,400
04/18/2017	24,700	27,700
04/19/2017	23,400	27,000
04/20/2017	23,100	27,000
04/21/2017	24,900	27,700
04/22/2017	24,000	26,400
04/23/2017	24,100	27,500
04/24/2017	23,400	26,900
04/25/2017	24,200	27,700
04/26/2017	24,100	26,500
04/27/2017	22,300	27,200
04/28/2017	24,900	28,300
04/29/2017	24,300	26,700
04/30/2017	24,700	26,500
	0	0
Monthly Total	709,300	829,800

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Well water
use in
Gallons

Date	Reading	Use in Gallons
04/30/2017	200,000	
05/01/2017	212,500	12,500
05/02/2017	225,000	12,500
05/03/2017	237,500	12,500
05/04/2017	250,000	12,500
05/05/2017	262,500	12,500
05/06/2017	275,000	12,500
05/07/2017	287,500	12,500
05/08/2017	300,000	12,500
05/09/2017	312,500	12,500
05/10/2017	325,000	12,500
05/11/2017	337,500	12,500
05/12/2017	350,000	12,500
05/13/2017	362,500	12,500
05/14/2017	375,000	12,500
05/15/2017	387,500	12,500
05/16/2017	400,000	12,500
05/17/2017	412,500	12,500
05/18/2017	425,000	12,500
05/19/2017	437,500	12,500
05/20/2017	450,000	12,500
05/21/2017	462,500	12,500
05/22/2017	475,000	12,500
05/23/2017	487,500	12,500
05/24/2017	500,000	12,500
05/25/2017	512,500	12,500
05/26/2017	525,000	12,500
05/27/2017	537,500	12,500
05/28/2017	550,000	12,500
05/29/2017	562,500	12,500
05/30/2017	575,000	12,500
05/31/2017	587,500	12,500

Date	Reading	Use
04/30/2017	10,283,700	
05/01/2017	10,290,200	6,500
05/02/2017	10,296,800	6,600
05/03/2017	10,303,100	6,300
05/04/2017	10,309,800	6,700
05/05/2017	10,316,700	6,900
05/06/2017	10,323,100	6,400
05/07/2017	10,329,600	6,500
05/08/2017	10,335,800	6,200
05/09/2017	10,342,500	6,700
05/10/2017	10,348,700	6,200
05/11/2017	10,355,200	6,500
05/12/2017	10,361,600	6,400
05/13/2017	10,368,200	6,600
05/14/2017	10,374,700	6,500
05/15/2017	10,381,600	6,900
05/16/2017	10,386,400	4,800
05/17/2017	10,393,800	7,400
05/18/2017	10,402,000	8,200
05/19/2017	10,407,800	5,800
05/20/2017	10,414,500	6,700
05/21/2017	10,420,700	6,200
05/22/2017	10,427,200	6,500
05/23/2017	10,434,900	7,700
05/24/2017	10,440,300	5,400
05/25/2017	10,446,500	6,200
05/26/2017	10,453,400	6,900
05/27/2017	10,459,800	6,400
05/28/2017	10,466,100	6,300
05/29/2017	10,474,600	8,500
05/30/2017	10,478,000	3,400
05/31/2017	10,482,900	4,900

Date	Reading	Use
04/30/2017	2,025,800	
05/01/2017	2,037,800	12,000
05/02/2017	2,050,700	12,900
05/03/2017	2,063,900	13,200
05/04/2017	2,076,100	12,200
05/05/2017	2,088,500	12,400
05/06/2017	2,101,200	12,700
05/07/2017	2,114,100	12,900
05/08/2017	2,126,600	12,500
05/09/2017	2,139,400	12,800
05/10/2017	2,151,800	12,400
05/11/2017	2,164,400	12,600
05/12/2017	2,177,500	13,100
05/13/2017	2,189,300	11,800
05/14/2017	2,201,700	12,400
05/15/2017	2,214,400	12,700
05/16/2017	2,226,700	12,300
05/17/2017	2,239,600	12,900
05/18/2017	2,251,400	11,800
05/19/2017	2,263,800	12,400
05/20/2017	2,277,200	13,400
05/21/2017	2,289,800	12,600
05/22/2017	2,301,900	12,100
05/23/2017	2,315,400	13,500
05/24/2017	2,328,000	12,600
05/25/2017	2,340,400	12,400
05/26/2017	2,353,200	12,800
05/27/2017	2,365,700	12,500
05/28/2017	2,378,700	13,000
05/29/2017	2,390,800	12,100
05/30/2017	2,403,400	12,600
05/31/2017	2,415,600	12,200

Date	Gallons
04/30/2017	0
05/01/2017	19,000
05/02/2017	19,100
05/03/2017	18,800
05/04/2017	19,200
05/05/2017	19,400
05/06/2017	18,900
05/07/2017	19,000
05/08/2017	18,700
05/09/2017	19,200
05/10/2017	18,700
05/11/2017	19,000
05/12/2017	18,900
05/13/2017	19,100
05/14/2017	19,000
05/15/2017	19,400
05/16/2017	17,300
05/17/2017	19,900
05/18/2017	20,700
05/19/2017	18,300
05/20/2017	19,200
05/21/2017	18,700
05/22/2017	19,000
05/23/2017	20,200
05/24/2017	17,900
05/25/2017	18,700
05/26/2017	19,400
05/27/2017	18,900
05/28/2017	18,800
05/29/2017	21,000
05/30/2017	15,900
05/31/2017	17,400

Monthly Total 586,700

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Date	Reading	Ise in Gallons
05/31/2017	587,500	
06/01/2017	600,000	12,500
06/02/2017	612,500	12,500
06/03/2017	625,000	12,500
06/04/2017	637,500	12,500
06/05/2017	662,500	25,000
06/06/2017	687,500	25,000
06/07/2017	712,500	25,000
06/08/2017	737,500	25,000
06/09/2017	762,500	25,000
06/10/2017	787,500	25,000
06/11/2017	812,500	25,000
06/12/2017	837,500	25,000
06/13/2017	862,500	25,000
06/14/2017	887,500	25,000
06/15/2017	912,500	25,000
06/16/2017	937,500	25,000
06/17/2017	962,500	25,000
06/18/2017	987,500	25,000
06/19/2017	1,012,500	25,000
06/20/2017	1,037,500	25,000
06/21/2017	1,062,500	25,000
06/22/2017	1,087,500	25,000
06/23/2017	1,112,500	25,000
06/24/2017	1,137,500	25,000
06/25/2017	1,162,500	25,000
06/26/2017	1,187,500	25,000
06/27/2017	1,212,500	25,000
06/28/2017	1,237,500	25,000
06/29/2017	1,262,500	25,000
06/30/2017	1,287,500	25,000
07/01/2017	1,312,500	25,000

Date	Reading	Use
05/31/2017	10,482,900	
06/01/2017	10,494,900	12,000
06/02/2017	10,507,900	13,000
06/03/2017	10,519,700	11,800
06/04/2017	10,532,200	12,500
06/05/2017	0	0
06/06/2017	0	0
06/07/2017	0	0
06/08/2017	0	0
06/09/2017	0	0
06/10/2017	0	0
06/11/2017	0	0
06/12/2017	0	0
06/13/2017	0	0
06/14/2017	0	0
06/15/2017	0	0
06/16/2017	0	0
06/17/2017	0	0
06/18/2017	0	0
06/19/2017	0	0
06/20/2017	0	0
06/21/2017	0	0
06/22/2017	0	0
06/23/2017	0	0
06/24/2017	0	0
06/25/2017	0	0
06/26/2017	0	0
06/27/2017	0	0
06/28/2017	0	0
06/29/2017	0	0
06/30/2017	0	0
07/01/2017	0	0

Date	Reading	Use
05/31/2017	2,415,600	
06/01/2017	2,421,000	5,400
06/02/2017	2,427,500	6,500
06/03/2017	2,433,600	6,100
06/04/2017	2,440,000	6,400
06/05/2017	2,445,800	5,800
06/06/2017	2,451,400	5,600
06/07/2017	2,457,700	6,300
06/08/2017	2,464,400	6,700
06/09/2017	2,470,500	6,100
06/10/2017	2,476,400	5,900
06/11/2017	2,482,700	6,300
06/12/2017	2,488,300	5,600
06/13/2017	2,494,200	5,900
06/14/2017	2,500,600	6,400
06/15/2017	2,506,700	6,100
06/16/2017	2,512,500	5,800
06/17/2017	2,517,700	5,200
06/18/2017	2,524,100	6,400
06/19/2017	2,530,300	6,200
06/20/2017	2,535,700	5,400
06/21/2017	2,540,900	5,200
06/22/2017	2,547,600	6,700
06/23/2017	2,553,700	6,100
06/24/2017	2,560,000	6,300
06/25/2017	2,566,100	6,100
06/26/2017	2,571,700	5,600
06/27/2017	2,577,600	5,900
06/28/2017	2,583,900	6,300
06/29/2017	2,590,300	6,400
06/30/2017	2,596,800	6,500
07/01/2017	2,603,000	6,200

Date	Well water	
	use in Gallons	Total Water used
05/31/2017	0	0
06/01/2017	24,500	29,900
06/02/2017	25,500	32,000
06/03/2017	24,300	30,400
06/04/2017	25,000	31,400
06/05/2017	25,000	30,800
06/06/2017	25,000	30,600
06/07/2017	25,000	31,300
06/08/2017	25,000	31,700
06/09/2017	25,000	31,100
06/10/2017	25,000	30,900
06/11/2017	25,000	31,300
06/12/2017	25,000	30,600
06/13/2017	25,000	30,900
06/14/2017	25,000	31,400
06/15/2017	25,000	31,100
06/16/2017	25,000	30,800
06/17/2017	25,000	30,200
06/18/2017	25,000	31,400
06/19/2017	25,000	31,200
06/20/2017	25,000	30,400
06/21/2017	25,000	30,200
06/22/2017	25,000	31,700
06/23/2017	25,000	31,100
06/24/2017	25,000	31,300
06/25/2017	25,000	31,100
06/26/2017	25,000	30,600
06/27/2017	25,000	30,900
06/28/2017	25,000	31,300
06/29/2017	25,000	31,400
06/30/2017	25,000	31,500
07/01/2017	25,000	
Monthly Total	774,300	930,500

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Date	Reading	Use in Gallons
06/30/2017	1,287,500	
07/01/2017	1,312,500	25,000
07/02/2017	1,337,500	25,000
07/03/2017	1,363,000	25,500
07/04/2017	1,388,000	25,000
07/05/2017	1,413,000	25,000
07/06/2017	1,438,000	25,000
07/07/2017	1,463,000	25,000
07/08/2017	1,488,000	25,000
07/09/2017	1,513,000	25,000
07/10/2017	1,538,000	25,000
07/11/2017	1,563,000	25,000
07/12/2017	1,588,000	25,000
07/13/2017	1,613,000	25,000
07/14/2017	1,638,000	25,000
07/15/2017	1,663,000	25,000
07/16/2017	1,688,000	25,000
07/17/2017	1,713,000	25,000
07/18/2017	1,738,000	25,000
07/19/2017	1,763,000	25,000
07/20/2017	1,788,000	25,000
07/21/2017	1,813,000	25,000
07/22/2017	1,838,000	25,000
07/23/2017	1,863,000	25,000
07/24/2017	1,888,000	25,000
07/25/2017	1,913,000	25,000
07/26/2017	1,938,000	25,000
07/27/2017	1,963,000	25,000
07/28/2017	1,988,000	25,000
07/29/2017	2,013,000	25,000
07/30/2017	2,038,000	25,000
07/31/2017	2,063,000	25,000

Date	Reading	Use
06/30/2017	0	
07/01/2017	0	0
07/02/2017	0	0
07/03/2017	0	0
07/04/2017	0	0
07/05/2017	0	0
07/06/2017	0	0
07/07/2017	0	0
07/08/2017	0	0
07/09/2017	0	0
07/10/2017	0	0
07/11/2017	0	0
07/12/2017	0	0
07/13/2017	0	0
07/14/2017	0	0
07/15/2017	0	0
07/16/2017	0	0
07/17/2017	0	0
07/18/2017	0	0
07/19/2017	0	0
07/20/2017	0	0
07/21/2017	0	0
07/22/2017	0	0
07/23/2017	0	0
07/24/2017	0	0
07/25/2017	0	0
07/26/2017	0	0
07/27/2017	0	0
07/28/2017	0	0
07/29/2017	0	0
07/30/2017	0	0
07/31/2017	0	0

Date	Reading	Use
06/30/2017	2,596,800	
07/01/2017	2,603,000	6,200
07/02/2017	2,610,500	7,500
07/03/2017	2,615,500	5,000
07/04/2017	2,623,900	8,400
07/05/2017	2,631,300	7,400
07/06/2017	2,637,700	6,400
07/07/2017	2,645,900	8,200
07/08/2017	2,654,300	8,400
07/09/2017	2,663,400	9,100
07/10/2017	2,669,800	6,400
07/11/2017	2,674,500	4,700
07/12/2017	2,679,800	5,300
07/13/2017	2,686,700	6,900
07/14/2017	2,693,800	7,100
07/15/2017	2,698,000	4,200
07/16/2017	2,702,900	4,900
07/17/2017	2,708,700	5,800
07/18/2017	2,715,400	6,700
07/19/2017	2,722,600	7,200
07/20/2017	2,731,000	8,400
07/21/2017	2,737,500	6,500
07/22/2017	2,742,400	4,900
07/23/2017	2,749,200	6,800
07/24/2017	2,756,800	7,600
07/25/2017	2,763,900	7,100
07/26/2017	2,770,700	6,800
07/27/2017	2,780,100	9,400
07/28/2017	2,785,900	5,800
07/29/2017	2,792,600	6,700
07/30/2017	2,798,300	5,700
07/31/2017	2,804,100	5,800

Date	Well water use in Gallons	Total Water used
06/30/2017	0	0
07/01/2017	25,000	31,200
07/02/2017	25,000	32,500
07/03/2017	25,500	30,500
07/04/2017	25,000	33,400
07/05/2017	25,000	32,400
07/06/2017	25,000	31,400
07/07/2017	25,000	33,200
07/08/2017	25,000	33,400
07/09/2017	25,000	34,100
07/10/2017	25,000	31,400
07/11/2017	25,000	29,700
07/12/2017	25,000	30,300
07/13/2017	25,000	31,900
07/14/2017	25,000	32,100
07/15/2017	25,000	29,200
07/16/2017	25,000	29,900
07/17/2017	25,000	30,800
07/18/2017	25,000	31,700
07/19/2017	25,000	32,200
07/20/2017	25,000	33,400
07/21/2017	25,000	31,500
07/22/2017	25,000	29,900
07/23/2017	25,000	31,800
07/24/2017	25,000	32,600
07/25/2017	25,000	32,100
07/26/2017	25,000	31,800
07/27/2017	25,000	34,400
07/28/2017	25,000	30,800
07/29/2017	25,000	31,700
07/30/2017	25,000	30,700
07/31/2017	25,000	30,800
Monthly Total	775,500	982,800

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Well water
use in
Gallons
Total Water
used

Date	Reading	Use in Gallons
08/31/2017	2,450,500	
09/01/2017	2,463,000	12,500
09/02/2017	2,475,500	12,500
09/03/2017	2,488,000	12,500
09/04/2017	2,500,500	12,500
09/05/2017	2,513,000	12,500
09/06/2017	2,525,500	12,500
09/07/2017	2,538,000	12,500
09/08/2017	2,550,500	12,500
09/09/2017	2,563,000	12,500
09/10/2017	2,575,500	12,500
09/11/2017	2,588,000	12,500
09/12/2017	2,600,500	12,500
09/13/2017	2,613,000	12,500
09/14/2017	2,625,500	12,500
09/15/2017	2,638,000	12,500
09/16/2017	2,650,500	12,500
09/17/2017	2,663,000	12,500
09/18/2017	2,675,500	12,500
09/19/2017	2,688,000	12,500
09/20/2017	2,700,500	12,500
09/21/2017	2,713,000	12,500
09/22/2017	2,725,500	12,500
09/23/2017	2,738,000	12,500
09/24/2017	2,750,500	12,500
09/25/2017	2,763,000	12,500
09/26/2017	2,775,500	12,500
09/27/2017	2,788,000	12,500
09/28/2017	2,800,500	12,500
09/29/2017	2,813,000	12,500
09/30/2017	2,825,500	12,500
10/01/2017	2,838,000	12,500

Date	Reading	Use
08/31/2017	387,500	
09/01/2017	400,000	12,500
09/02/2017	412,500	12,500
09/03/2017	425,000	12,500
09/04/2017	437,500	12,500
09/05/2017	450,000	12,500
09/06/2017	462,500	12,500
09/07/2017	475,000	12,500
09/08/2017	487,500	12,500
09/09/2017	500,000	12,500
09/10/2017	512,500	12,500
09/11/2017	525,000	12,500
09/12/2017	537,500	12,500
09/13/2017	550,000	12,500
09/14/2017	562,500	12,500
09/15/2017	575,000	12,500
09/16/2017	587,500	12,500
09/17/2017	600,000	12,500
09/18/2017	612,500	12,500
09/19/2017	625,000	12,500
09/20/2017	637,500	12,500
09/21/2017	650,000	12,500
09/22/2017	662,500	12,500
09/23/2017	675,000	12,500
09/24/2017	687,500	12,500
09/25/2017	700,000	12,500
09/26/2017	712,500	12,500
09/27/2017	725,000	12,500
09/28/2017	737,500	12,500
09/29/2017	750,000	12,500
09/30/2017	762,500	12,500
10/01/2017	775,000	12,500

Date	Reading	Use
08/31/2017	3,035,400	
09/01/2017	3,040,800	5,400
09/02/2017	3,046,600	5,800
09/03/2017	3,051,700	5,100
09/04/2017	3,056,400	4,700
09/05/2017	3,061,700	5,300
09/06/2017	3,067,100	5,400
09/07/2017	3,072,900	5,800
09/08/2017	3,077,100	4,200
09/09/2017	3,083,300	6,200
09/10/2017	3,088,900	5,600
09/11/2017	3,093,800	4,900
09/12/2017	3,099,200	5,400
09/13/2017	3,104,800	5,600
09/14/2017	3,109,900	5,100
09/15/2017	3,115,200	5,300
09/16/2017	3,120,900	5,700
09/17/2017	3,125,800	4,900
09/18/2017	3,131,100	5,300
09/19/2017	3,137,600	6,500
09/20/2017	3,143,800	6,200
09/21/2017	3,150,200	6,400
09/22/2017	3,156,000	5,800
09/23/2017	3,161,400	5,400
09/24/2017	3,167,800	6,400
09/25/2017	3,172,600	4,800
09/26/2017	3,179,300	6,700
09/27/2017	3,185,000	5,700
09/28/2017	3,189,800	4,800
09/29/2017	3,195,400	5,600
09/30/2017	3,201,300	5,900
10/01/2017	3,207,200	5,900

Date	Gallons	used
07/31/2017	0	0
08/01/2017	25,000	30,400
08/02/2017	25,000	30,800
08/03/2017	25,000	30,100
08/04/2017	25,000	29,700
08/05/2017	25,000	30,300
08/06/2017	25,000	30,400
08/07/2017	25,000	30,800
08/08/2017	25,000	29,200
08/09/2017	25,000	31,200
08/10/2017	25,000	30,600
08/11/2017	25,000	29,900
08/12/2017	25,000	30,400
08/13/2017	25,000	30,600
08/14/2017	25,000	30,100
08/15/2017	25,000	30,300
08/16/2017	25,000	30,700
08/17/2017	25,000	29,900
08/18/2017	25,000	30,300
08/19/2017	25,000	31,500
08/20/2017	25,000	31,200
08/21/2017	25,000	31,400
08/22/2017	25,000	30,800
08/23/2017	25,000	30,400
08/24/2017	25,000	31,400
08/25/2017	25,000	29,800
08/26/2017	25,000	31,700
08/27/2017	25,000	30,700
08/28/2017	25,000	29,800
08/29/2017	25,000	30,600
08/30/2017	25,000	30,900
08/31/2017	25,000	30,900
Monthly Total	775,000	946,800

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Well water
use in
Gallons

Date	Reading	Use in Gallons
07/31/2017	2,063,000	
08/01/2017	2,075,500	12,500
08/02/2017	2,088,000	12,500
08/03/2017	2,100,500	12,500
08/04/2017	2,113,000	12,500
08/05/2017	2,125,500	12,500
08/06/2017	2,138,000	12,500
08/07/2017	2,150,500	12,500
08/08/2017	2,163,000	12,500
08/09/2017	2,175,500	12,500
08/10/2017	2,188,000	12,500
08/11/2017	2,200,500	12,500
08/12/2017	2,213,000	12,500
08/13/2017	2,225,500	12,500
08/14/2017	2,238,000	12,500
08/15/2017	2,250,500	12,500
08/16/2017	2,263,000	12,500
08/17/2017	2,275,500	12,500
08/18/2017	2,288,000	12,500
08/19/2017	2,300,500	12,500
08/20/2017	2,313,000	12,500
08/21/2017	2,325,500	12,500
08/22/2017	2,338,000	12,500
08/23/2017	2,350,500	12,500
08/24/2017	2,363,000	12,500
08/25/2017	2,375,500	12,500
08/26/2017	2,388,000	12,500
08/27/2017	2,400,500	12,500
08/28/2017	2,413,000	12,500
08/29/2017	2,425,500	12,500
08/30/2017	2,438,000	12,500
08/31/2017	2,450,500	12,500

Date	Reading	Use
07/31/2017	0	
08/01/2017	12,500	12,500
08/02/2017	25,000	12,500
08/03/2017	37,500	12,500
08/04/2017	50,000	12,500
08/05/2017	62,500	12,500
08/06/2017	75,000	12,500
08/07/2017	87,500	12,500
08/08/2017	100,000	12,500
08/09/2017	112,500	12,500
08/10/2017	125,000	12,500
08/11/2017	137,500	12,500
08/12/2017	150,000	12,500
08/13/2017	162,500	12,500
08/14/2017	175,000	12,500
08/15/2017	187,500	12,500
08/16/2017	200,000	12,500
08/17/2017	212,500	12,500
08/18/2017	225,000	12,500
08/19/2017	237,500	12,500
08/20/2017	250,000	12,500
08/21/2017	262,500	12,500
08/22/2017	275,000	12,500
08/23/2017	287,500	12,500
08/24/2017	300,000	12,500
08/25/2017	312,500	12,500
08/26/2017	325,000	12,500
08/27/2017	337,500	12,500
08/28/2017	350,000	12,500
08/29/2017	362,500	12,500
08/30/2017	375,000	12,500
08/31/2017	387,500	12,500

Date	Reading	Use
07/31/2017	2,804,100	
08/01/2017	2,811,400	7,300
08/02/2017	2,819,800	8,400
08/03/2017	2,832,400	12,600
08/04/2017	2,840,400	8,000
08/05/2017	2,846,100	5,700
08/06/2017	2,856,200	10,100
08/07/2017	2,862,300	6,100
08/08/2017	2,867,500	5,200
08/09/2017	2,875,400	7,900
08/10/2017	2,882,700	7,300
08/11/2017	2,891,900	9,200
08/12/2017	2,899,100	7,200
08/13/2017	2,906,700	7,600
08/14/2017	2,913,400	6,700
08/15/2017	2,921,400	8,000
08/16/2017	2,929,300	7,900
08/17/2017	2,935,700	6,400
08/18/2017	2,942,900	7,200
08/19/2017	2,947,400	4,500
08/20/2017	2,954,600	7,200
08/21/2017	2,961,300	6,700
08/22/2017	2,969,400	8,100
08/23/2017	2,979,400	10,000
08/24/2017	2,984,200	4,800
08/25/2017	2,992,400	8,200
08/26/2017	2,999,600	7,200
08/27/2017	3,006,500	6,900
08/28/2017	3,012,800	6,300
08/29/2017	3,021,400	8,600
08/30/2017	3,027,900	6,500
08/31/2017	3,035,400	7,500

Date	Gallons
07/31/2017	0
08/01/2017	25,000
08/02/2017	25,000
08/03/2017	25,000
08/04/2017	25,000
08/05/2017	25,000
08/06/2017	25,000
08/07/2017	25,000
08/08/2017	25,000
08/09/2017	25,000
08/10/2017	25,000
08/11/2017	25,000
08/12/2017	25,000
08/13/2017	25,000
08/14/2017	25,000
08/15/2017	25,000
08/16/2017	25,000
08/17/2017	25,000
08/18/2017	25,000
08/19/2017	25,000
08/20/2017	25,000
08/21/2017	25,000
08/22/2017	25,000
08/23/2017	25,000
08/24/2017	25,000
08/25/2017	25,000
08/26/2017	25,000
08/27/2017	25,000
08/28/2017	25,000
08/29/2017	25,000
08/30/2017	25,000
08/31/2017	25,000

Monthly Total 775,000

Total Water
used

0
32,300
33,400
37,600
33,000
30,700
35,100
31,100
30,200
32,900
32,300
34,200
32,200
32,600
31,700
33,000
32,900
31,400
32,200
29,500
32,200
31,700
33,100
35,000
29,800
33,200
32,200
31,900
31,300
33,600
31,500
32,500

1,006,300

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Well water
use in
Gallons

Date	Reading	Use in Gallons
	2,450,500	
10/01/2017	2,463,000	12,500
10/02/2017	2,475,500	12,500
10/03/2017	2,488,000	12,500
10/04/2017	2,500,500	12,500
10/05/2017	2,513,000	12,500
10/06/2017	2,525,500	12,500
10/07/2017	2,538,000	12,500
10/08/2017	2,550,500	12,500
10/09/2017	2,563,000	12,500
10/10/2017	2,575,500	12,500
10/11/2017	2,588,000	12,500
10/12/2017	2,600,500	12,500
10/13/2017	2,613,000	12,500
10/14/2017	2,625,500	12,500
10/15/2017	2,638,000	12,500
10/16/2017	2,650,500	12,500
10/17/2017	2,663,000	12,500
10/18/2017	2,675,500	12,500
10/19/2017	2,688,000	12,500
10/20/2017	2,700,500	12,500
10/21/2017	2,713,000	12,500
10/22/2017	2,725,500	12,500
10/23/2017	2,738,000	12,500
10/24/2017	2,750,500	12,500
10/25/2017	2,763,000	12,500
10/26/2017	2,775,500	12,500
10/27/2017	2,788,000	12,500
10/28/2017	2,800,500	12,500
10/29/2017	2,813,000	12,500
10/30/2017	2,825,500	12,500
10/31/2017	2,838,000	12,500

Date	Reading	Use
	387,500	
10/01/2017	400,000	12,500
10/02/2017	412,500	12,500
10/03/2017	425,000	12,500
10/04/2017	437,500	12,500
10/05/2017	450,000	12,500
10/06/2017	462,500	12,500
10/07/2017	475,000	12,500
10/08/2017	487,500	12,500
10/09/2017	500,000	12,500
10/10/2017	512,500	12,500
10/11/2017	525,000	12,500
10/12/2017	537,500	12,500
10/13/2017	550,000	12,500
10/14/2017	562,500	12,500
10/15/2017	575,000	12,500
10/16/2017	587,500	12,500
10/17/2017	600,000	12,500
10/18/2017	612,500	12,500
10/19/2017	625,000	12,500
10/20/2017	637,500	12,500
10/21/2017	650,000	12,500
10/22/2017	662,500	12,500
10/23/2017	675,000	12,500
10/24/2017	687,500	12,500
10/25/2017	700,000	12,500
10/26/2017	712,500	12,500
10/27/2017	725,000	12,500
10/28/2017	737,500	12,500
10/29/2017	750,000	12,500
10/30/2017	762,500	12,500
10/31/2017	775,000	12,500

Date	Reading	Use
	3,035,400	
10/01/2017	3,040,800	5,400
10/02/2017	3,046,600	5,800
10/03/2017	3,051,700	5,100
10/04/2017	3,056,400	4,700
10/05/2017	3,061,700	5,300
10/06/2017	3,067,100	5,400
10/07/2017	3,072,900	5,800
10/08/2017	3,077,100	4,200
10/09/2017	3,083,300	6,200
10/10/2017	3,088,900	5,600
10/11/2017	3,093,800	4,900
10/12/2017	3,099,200	5,400
10/13/2017	3,104,800	5,600
10/14/2017	3,109,900	5,100
10/15/2017	3,115,200	5,300
10/16/2017	3,120,900	5,700
10/17/2017	3,125,800	4,900
10/18/2017	3,131,100	5,300
10/19/2017	3,137,600	6,500
10/20/2017	3,143,800	6,200
10/21/2017	3,150,200	6,400
10/22/2017	3,156,000	5,800
10/23/2017	3,161,400	5,400
10/24/2017	3,167,800	6,400
10/25/2017	3,172,600	4,800
10/26/2017	3,179,300	6,700
10/27/2017	3,185,000	5,700
10/28/2017	3,189,800	4,800
10/29/2017	3,195,400	5,600
10/30/2017	3,201,300	5,900
10/31/2017	3,207,200	5,900

Date	Well water use in Gallons
	0
10/01/2017	25,000
10/02/2017	25,000
10/03/2017	25,000
10/04/2017	25,000
10/05/2017	25,000
10/06/2017	25,000
10/07/2017	25,000
10/08/2017	25,000
10/09/2017	25,000
10/10/2017	25,000
10/11/2017	25,000
10/12/2017	25,000
10/13/2017	25,000
10/14/2017	25,000
10/15/2017	25,000
10/16/2017	25,000
10/17/2017	25,000
10/18/2017	25,000
10/19/2017	25,000
10/20/2017	25,000
10/21/2017	25,000
10/22/2017	25,000
10/23/2017	25,000
10/24/2017	25,000
10/25/2017	25,000
10/26/2017	25,000
10/27/2017	25,000
10/28/2017	25,000
10/29/2017	25,000
10/30/2017	25,000
10/31/2017	25,000

Monthly Total 775,000

Total Water
used

0
30,400
30,800
30,100
29,700
30,300
30,400
30,800
29,200
31,200
30,600
29,900
30,400
30,600
30,100
30,300
30,700
29,900
30,300
31,500
31,200
31,400
30,800
30,400
31,400
29,800
31,700
30,700
29,800
30,600
30,900
30,900
946,800

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Well water
use in
Gallons

Date	Reading	Use in Gallons
10/31/2017	3,225,500	
11/01/2017	3,238,000	12,500
11/02/2017	3,250,500	12,500
11/03/2017	3,263,000	12,500
11/04/2017	3,275,500	12,500
11/05/2017	3,288,000	12,500
11/06/2017	3,300,500	12,500
11/07/2017	3,313,000	12,500
11/08/2017	3,325,500	12,500
11/09/2017	3,338,000	12,500
11/10/2017	3,350,500	12,500
11/11/2017	3,363,000	12,500
11/12/2017	3,375,500	12,500
11/13/2017	3,388,000	12,500
11/14/2017	3,400,500	12,500
11/15/2017	3,413,000	12,500
11/16/2017	3,425,500	12,500
11/17/2017	3,438,000	12,500
11/18/2017	3,450,500	12,500
11/19/2017	3,463,000	12,500
11/20/2017	3,475,500	12,500
11/21/2017	3,488,000	12,500
11/22/2017	3,500,500	12,500
11/23/2017	3,513,000	12,500
11/24/2017	3,525,500	12,500
11/25/2017	3,538,000	12,500
11/26/2017	3,550,500	12,500
11/27/2017	3,563,000	12,500
11/28/2017	3,575,500	12,500
11/29/2017	3,588,000	12,500
11/30/2017	3,600,500	12,500
12/01/2017	3,613,000	12,500

Date	Reading	Use
10/31/2017	1,150,000	
11/01/2017	1,162,500	12,500
11/02/2017	1,175,000	12,500
11/03/2017	1,187,500	12,500
11/04/2017	1,200,000	12,500
11/05/2017	1,212,500	12,500
11/06/2017	1,225,000	12,500
11/07/2017	1,237,500	12,500
11/08/2017	1,250,000	12,500
11/09/2017	1,262,500	12,500
11/10/2017	1,275,000	12,500
11/11/2017	1,287,500	12,500
11/12/2017	1,300,000	12,500
11/13/2017	1,312,500	12,500
11/14/2017	1,325,000	12,500
11/15/2017	1,337,500	12,500
11/16/2017	1,350,000	12,500
11/17/2017	1,362,500	12,500
11/18/2017	1,375,000	12,500
11/19/2017	1,387,500	12,500
11/20/2017	1,400,000	12,500
11/21/2017	1,412,500	12,500
11/22/2017	1,425,000	12,500
11/23/2017	1,437,500	12,500
11/24/2017	1,450,000	12,500
11/25/2017	1,462,500	12,500
11/26/2017	1,475,000	12,500
11/27/2017	1,487,500	12,500
11/28/2017	1,500,000	12,500
11/29/2017	1,512,500	12,500
11/30/2017	1,525,000	12,500
12/01/2017	1,537,500	12,500

Date	Reading	Use
10/31/2017	3,365,000	
11/01/2017	3,367,200	2,200
11/02/2017	3,369,600	2,400
11/03/2017	3,372,300	2,700
11/04/2017	3,374,400	2,100
11/05/2017	3,376,800	2,400
11/06/2017	3,379,400	2,600
11/07/2017	3,381,900	2,500
11/08/2017	3,384,700	2,800
11/09/2017	3,386,500	1,800
11/10/2017	3,388,700	2,200
11/11/2017	3,391,300	2,600
11/12/2017	3,393,600	2,300
11/13/2017	3,396,000	2,400
11/14/2017	3,398,000	2,000
11/15/2017	3,400,200	2,200
11/16/2017	3,402,300	2,100
11/17/2017	3,404,700	2,400
11/18/2017	3,406,500	1,800
11/19/2017	3,408,700	2,200
11/20/2017	3,411,100	2,400
11/21/2017	3,413,400	2,300
11/22/2017	3,415,600	2,200
11/23/2017	3,418,200	2,600
11/24/2017	3,420,600	2,400
11/25/2017	3,422,900	2,300
11/26/2017	3,424,900	2,000
11/27/2017	3,427,000	2,100
11/28/2017	3,429,600	2,600
11/29/2017	3,431,900	2,300
11/30/2017	3,434,300	2,400
12/01/2017	3,436,400	2,100

Date	Gallons
09/30/2017	0
10/01/2017	25,000
10/02/2017	25,000
10/03/2017	25,000
10/04/2017	25,000
10/05/2017	25,000
10/06/2017	25,000
10/07/2017	25,000
10/08/2017	25,000
10/09/2017	25,000
10/10/2017	25,000
10/11/2017	25,000
10/12/2017	25,000
10/13/2017	25,000
10/14/2017	25,000
10/15/2017	25,000
10/16/2017	25,000
10/17/2017	25,000
10/18/2017	25,000
10/19/2017	25,000
10/20/2017	25,000
10/21/2017	25,000
10/22/2017	25,000
10/23/2017	25,000
10/24/2017	25,000
10/25/2017	25,000
10/26/2017	25,000
10/27/2017	25,000
10/28/2017	25,000
10/29/2017	25,000
10/30/2017	25,000
10/31/2017	25,000

Monthly Total 775,000

Total Water
used

0
27,200
27,400
27,700
27,100
27,400
27,600
27,500
27,800
26,800
27,200
27,600
27,300
27,400
27,000
27,200
27,100
27,400
26,800
27,200
27,400
27,300
27,200
27,600
27,400
27,300
27,000
27,100
27,600
27,300
27,400
27,100

846,400

Thunder Ridge, LLC Well Tracking Form

West Well

East Well

Rural Water

Well water
use in
Gallons

Date	Reading	Use in Gallons
11/30/2017	3,613,000	
12/01/2017	3,625,500	12,500
12/02/2017	3,638,000	12,500
12/03/2017	3,650,500	12,500
12/04/2017	3,663,000	12,500
12/05/2017	3,675,500	12,500
12/06/2017	3,688,000	12,500
12/07/2017	3,700,500	12,500
12/08/2017	3,713,000	12,500
12/09/2017	3,725,500	12,500
12/10/2017	3,738,000	12,500
12/11/2017	3,750,500	12,500
12/12/2017	3,763,000	12,500
12/13/2017	3,775,500	12,500
12/14/2017	3,788,000	12,500
12/15/2017	3,800,500	12,500
12/16/2017	3,813,000	12,500
12/17/2017	3,825,500	12,500
12/18/2017	3,838,000	12,500
12/19/2017	3,850,500	12,500
12/20/2017	3,863,000	12,500
12/21/2017	3,875,500	12,500
12/22/2017	3,888,000	12,500
12/23/2017	3,900,500	12,500
12/24/2017	3,913,000	12,500
12/25/2017	3,925,500	12,500
12/26/2017	3,938,000	12,500
12/27/2017	3,950,500	12,500
12/28/2017	3,963,000	12,500
12/29/2017	3,975,500	12,500
12/30/2017	3,988,000	12,500
12/31/2017	4,000,500	12,500

Date	Reading	Use
11/30/2017	1,525,000	
12/01/2017	1,537,500	12,500
12/02/2017	1,550,000	12,500
12/03/2017	1,562,500	12,500
12/04/2017	1,575,000	12,500
12/05/2017	1,587,500	12,500
12/06/2017	1,600,000	12,500
12/07/2017	1,612,500	12,500
12/08/2017	1,625,000	12,500
12/09/2017	1,637,500	12,500
12/10/2017	1,650,000	12,500
12/11/2017	1,662,500	12,500
12/12/2017	1,675,000	12,500
12/13/2017	1,687,500	12,500
12/14/2017	1,700,000	12,500
12/15/2017	1,712,500	12,500
12/16/2017	1,725,000	12,500
12/17/2017	1,737,500	12,500
12/18/2017	1,750,000	12,500
12/19/2017	1,762,500	12,500
12/20/2017	1,775,000	12,500
12/21/2017	1,787,500	12,500
12/22/2017	1,800,000	12,500
12/23/2017	1,812,500	12,500
12/24/2017	1,825,000	12,500
12/25/2017	1,837,500	12,500
12/26/2017	1,850,000	12,500
12/27/2017	1,862,500	12,500
12/28/2017	1,875,000	12,500
12/29/2017	1,887,500	12,500
12/30/2017	1,900,000	12,500
12/31/2017	1,912,500	12,500

Date	Reading	Use
11/30/2017	3,436,400	
12/01/2017	3,438,500	2,100
12/02/2017	3,440,200	1,700
12/03/2017	3,442,000	1,800
12/04/2017	3,444,000	2,000
12/05/2017	3,445,600	1,600
12/06/2017	3,447,500	1,900
12/07/2017	3,449,700	2,200
12/08/2017	3,451,500	1,800
12/09/2017	3,453,400	1,900
12/10/2017	3,455,800	2,400
12/11/2017	3,457,900	2,100
12/12/2017	3,459,600	1,700
12/13/2017	3,461,800	2,200
12/14/2017	3,463,300	1,500
12/15/2017	3,465,700	2,400
12/16/2017	3,466,900	1,200
12/17/2017	3,469,700	2,800
12/18/2017	3,471,300	1,600
12/19/2017	3,473,400	2,100
12/20/2017	3,475,700	2,300
12/21/2017	3,477,600	1,900
12/22/2017	3,479,800	2,200
12/23/2017	3,481,600	1,800
12/24/2017	3,483,800	2,200
12/25/2017	3,485,700	1,900
12/26/2017	3,487,800	2,100
12/27/2017	3,489,600	1,800
12/28/2017	3,491,800	2,200
12/29/2017	3,493,900	2,100
12/30/2017	3,496,200	2,300
12/31/2017	3,498,000	1,800

Date	Well water use in Gallons
11/30/2018	0
12/01/2018	25,000
12/02/2018	25,000
12/03/2018	25,000
12/04/2018	25,000
12/05/2018	25,000
12/06/2018	25,000
12/07/2018	25,000
12/08/2018	25,000
12/09/2018	25,000
12/10/2018	25,000
12/11/2018	25,000
12/12/2018	25,000
12/13/2018	25,000
12/14/2018	25,000
12/15/2018	25,000
12/16/2018	25,000
12/17/2018	25,000
12/18/2018	25,000
12/19/2018	25,000
12/20/2018	25,000
12/21/2018	25,000
12/22/2018	25,000
12/23/2018	25,000
12/24/2018	25,000
12/25/2018	25,000
12/26/2018	25,000
12/27/2018	25,000
12/28/2018	25,000
12/29/2018	25,000
12/30/2018	25,000
12/31/2018	25,000

Monthly Total 775,000

Total Water
used

0
27,100
26,700
26,800
27,000
26,600
26,900
27,200
26,800
26,900
27,400
27,100
26,700
27,200
26,500
27,400
26,200
27,800
26,600
27,100
27,300
26,900
27,200
26,800
27,200
26,900
27,100
26,800
27,200
27,100
27,300
26,800
836,600

Report of Examination of Works and/or Application of Water to Beneficial Use

For Permit No. 8068-3

APRIL 21, 2025

I have this day, date, made a thorough examination of the water use system constructed by Thunder Ridge RE, LLC, PO Box 188, Pipestone, MN 56164 of Permit No. 8068-3, bearing the priority of December 15, 2014 authorizing the diversion of 0.11 cu. ft. per second of the waters of the Sioux Quartzite Aquifer for swine commercial use purposes, in Turner County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Marion Well Drilling
- 2) No. of Wells 2
- 3) Depth(s) 272 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 5 inches
- 2) Length 252 feet
- 3) Type Plastic

Screen:

- 1) Type Plastic
- 2) Length 20 feet
- 3) Static water level 90 feet

Pump:

- 1) Make Submersibles
- 2) Model Unknown
- 3) Size Unknown
- 4) Capacity 70 total GPM

Motor:

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

only auth for 0.11 cfs (50 gpm)
per Darrell & Marty, wells
op @ ~ 35 gpm each + run at same
time
left VM for Marty Rost
(507-215-0482) 5/30/25

marty.rost@pipestone.com

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

- 1) Type PVC - buried
- 2) Size Unknown inches
- 3) Length about 300 feet

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: WELL LOCATIONS
From the NE corner Sec 19 T100N R55W EAST WELL: 485 ft S & 1070 ft W, Lat 43.47178 Long -
97.38390 (NE ¼ NE ¼) WEST WELL: 480 ft S & 1130 ft W, Lat 43.47180 Long -97.38425 (NE ¼ NE ¼).

2. The works are capable of diverting and conveying to the place of use 0.16 cu. ft. per second of water which is to be used for commercial swine use.

The license should be issued for 0.11 cfs.

3. All structures, wells and lands on map Y

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

FSA photographs and the ArcGIS software were used to prepare the site map.

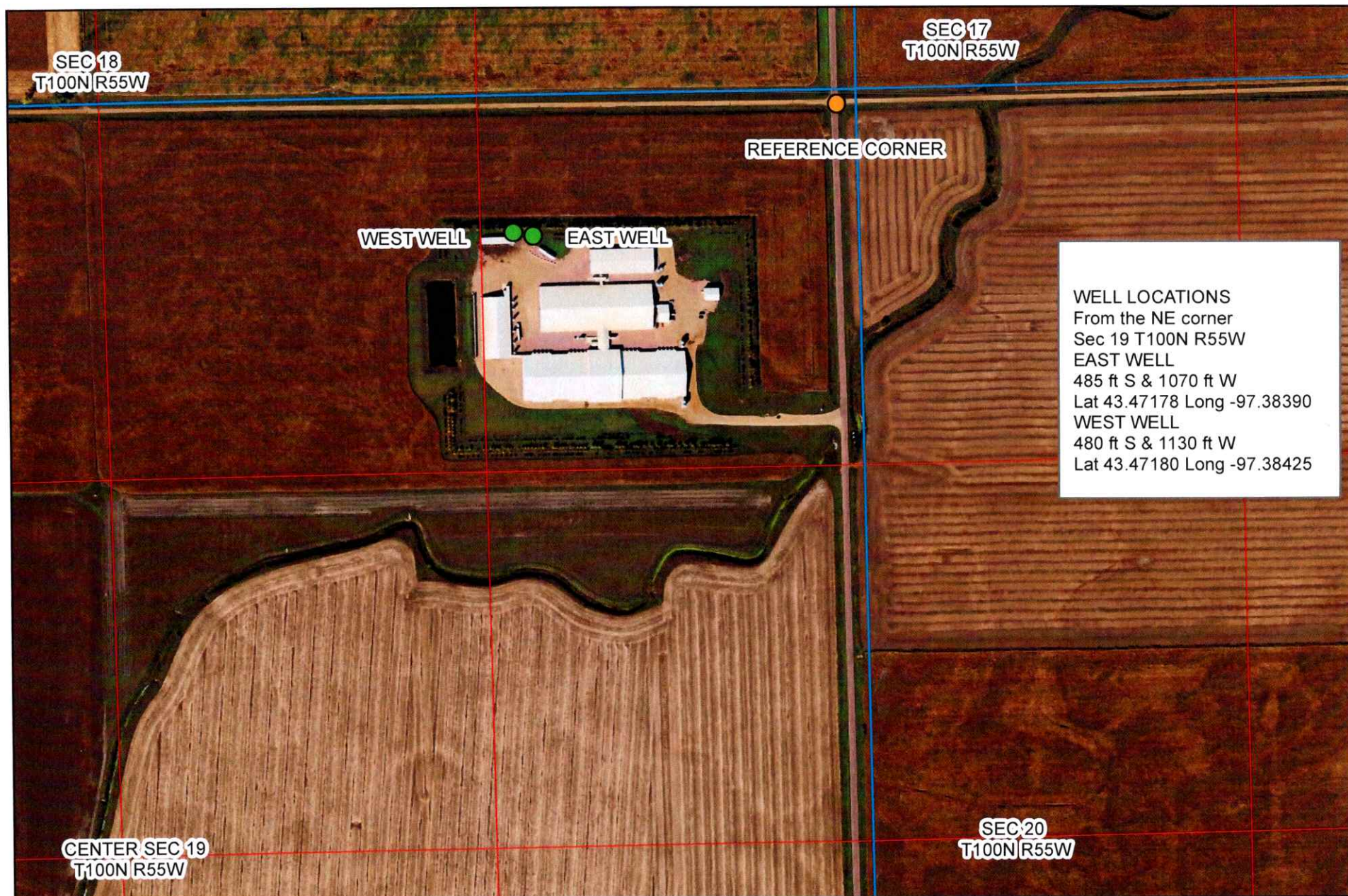
The mailing address and the telephone number in the permit materials are current.

I was in contact with Mr. Marty Rost (507/215-0482) regarding details associated with the permit.

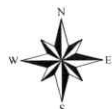


Darrell DeBoer
Water Rights Inspector
DENR, Water Rights Program

Date report completed: April 21, 2025



WELL LOCATIONS
From the NE corner
Sec 19 T100N R55W
EAST WELL
485 ft S & 1070 ft W
Lat 43.47178 Long -97.38390
WEST WELL
480 ft S & 1130 ft W
Lat 43.47180 Long -97.38425



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