

WATER PERMIT NO. 7392-3

Name of Applicant: Lincoln Pipestone Rural Water

Address: E Hwy 14, Box 18, Lake Benton MN 56149

Phone: 507 368-4248

Amount of Water Claimed: 2.67 cfs (614 acre-feet)

Total Acres: NA

Source of Water Supply: groundwater (two wells)

Water to be used for: rural water system use

County: Brookings

Type of Waste Disposal System:

Location: 2 miles south of Elkton

PRIORITY

Date Received: 8-8-12

Application/License Fee: \$ 1,350

Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: N ½ Section 34-T109N-R47W

Land to be Irrigated: NA

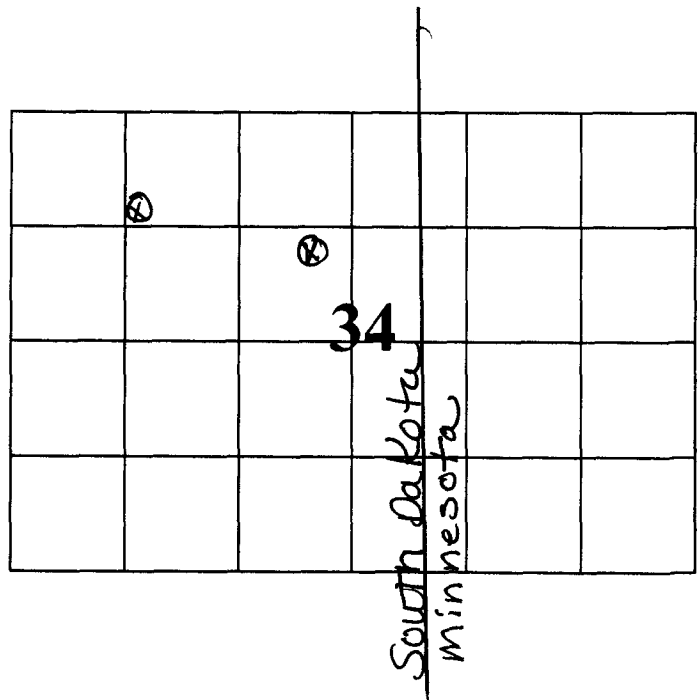
Depth of Well: 70 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by: John C Lichter, PE



Reviewed and the Number Assigned on: 8-8-12

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	(office use only)	
	No. <u>7392-3</u>	Hydrologic Unit <u>10170203</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>Brookings Register PO Box 177</u> <u>605-692-6271</u>	<u>57006</u>

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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 of Applicant Lincoln Pipestone Rural Water, Attention: Dennis Healy Phone (507) 368-4248
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address East Highway 14, Box 18 Lake Benton MN 56149
(Address) (City) (State) (Zip Code)
2. Amount of water claimed 2.67 *CFS or 1200 **GPM 614 AF/Yr ***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 Big Sioux Aquifer
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Brookings
2 wells in N1/2 of section 34-T109N-R47W
5. County or counties where water will be used Lincoln, Lyon, Murray and Pipestone Counties, Minnesota
6. Annual period during which water is to be used Year Round 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)

LPRW plans to install two high capacity wells located at proposed Sites 1 and 2 shown on the accompanying figure. The water will be treated for iron and manganese, disinfected and then used to supply Lincoln Pipestone Rural Water customers. The water will be used to augment production from the adjacent Verdi Well field.

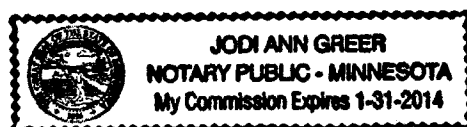
STATE OF MINNESOTA)
County of Lincoln) SS

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

I, Dennis Healy, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Dennis B. Healy, CEO

Subscribed and sworn to before me this 6th day of August 20 12



Jodi Ann Greer
Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 7392-3**

Date of first receipt of application August 8, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7392-3 to Lincoln Pipestone Rural Water, E Hwy 14, Box 18, Lake Benton MN 56149 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. 7392-3 appropriates 2.67 cubic feet of water per second (614 acre-feet annually) from two wells to be completed into the Big Sioux: Aurora Aquifer (70 feet deep) located in the N 1/2 Section 34-T109N-R47W. Lincoln Pipestone Rural Water serves users in Lincoln, Lyon, Murray and Pipestone Counties in Minnesota.
2. The water appropriated shall be used for the purpose of rural water system use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 7392-3 is November 12, 2012.
5. The date from which applicant may claim right is August 8, 2012.
6. One-fifth of the construction is to be completed on or before May 12, 2015.
7. All construction is to be completed on or before November 12, 2017.
8. Water is to be put to beneficial use on or before November 12, 2021.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

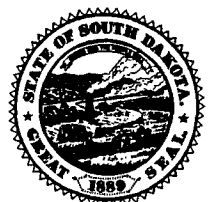
QUALIFICATIONS

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 7392-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Water Permit No. 7392-3 authorizes a total annual diversion of 614 acre feet of water annually.
4. Lincoln Pipestone Rural Water shall report to the Chief Engineer annually the amount of water withdrawn from the Aurora Management Unit of the Big Sioux Aquifer.

WATER MANAGEMENT BOARD

By: Garland Erbele
Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

DEC 19 2012
date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 24-inches Depth +/- 70 feet
- b) Casing Type LCS Diameter 18-inch Thickness 0.625 inch
- c) Screen Type 304 stainless Diameter 16-inch Thickness 1.2 inches
- d) Gravel Pack Native Fm Length of Gravel Pack N/A
- e) Depth to Top of Water Bearing Material 5 to 10 feet
- f) Depth to Water (ground surface to water level) 15 feet
- g) Distance to nearest existing domestic well:
- On applicant's property N/A On property owned by others 1,100 feet

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

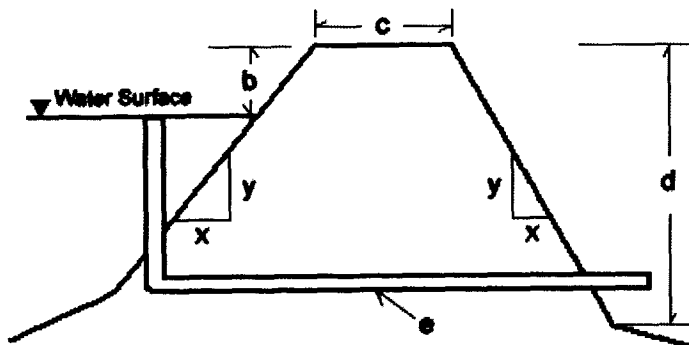
3. Dugout Information

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

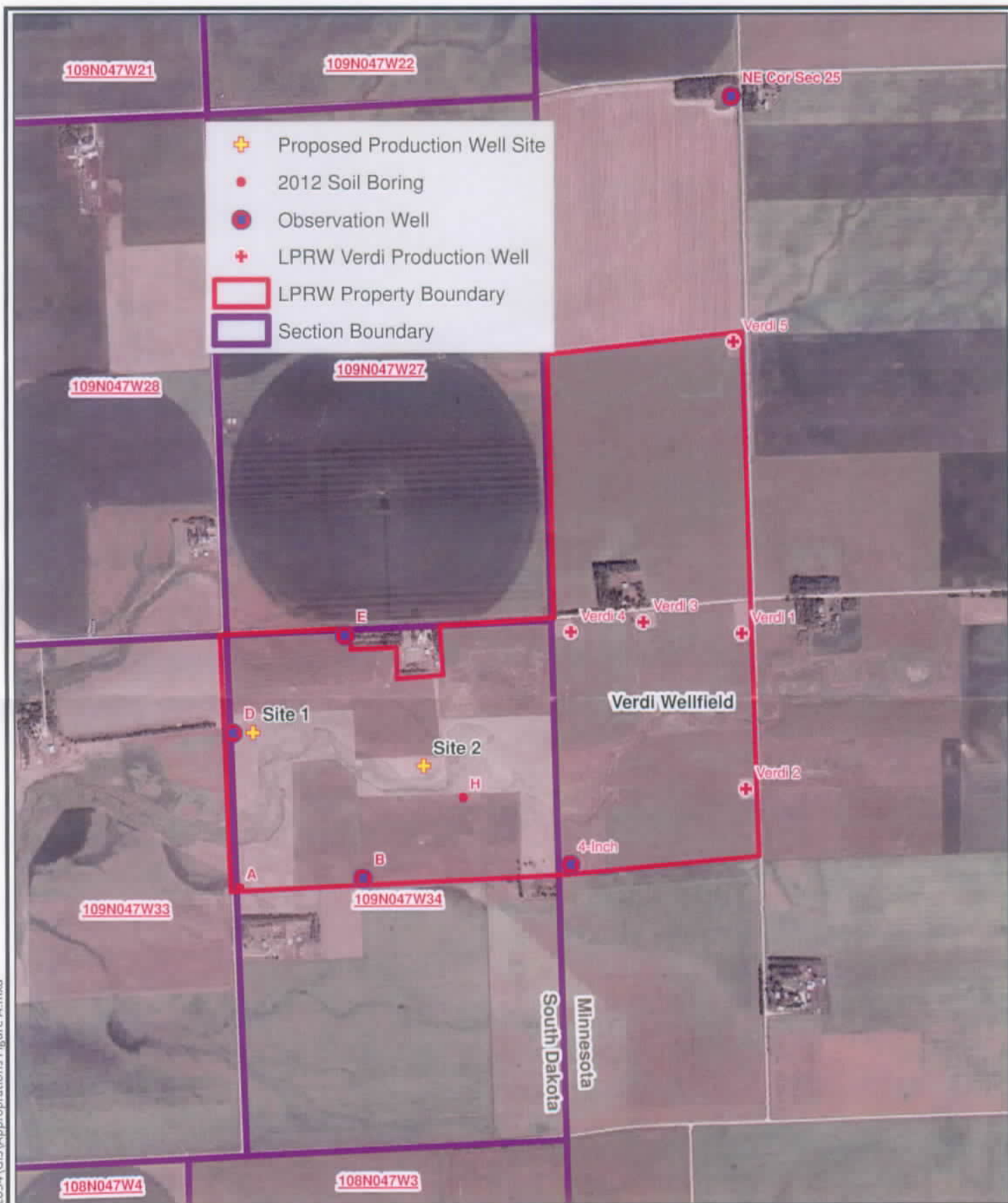
4. Water Storage Dams

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



W:\ws\12054\GIS\Approprations Figure A.mxd

Source: MS Virtual Earth
Projection: NAD83 UTM Zone 15N

0 500 1,000 Feet



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LPRW - 2012 Exploration

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LPRW Well and Boring Locations

Figure
1



8/2/2012

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Liesch Associates, Inc. ■ 13400 15th Avenue North ■ Minneapolis, MN 55441
Phone: (763) 489-3100 ■ Toll Free: (800) 338-7914 ■ Fax: (763) 489-3101

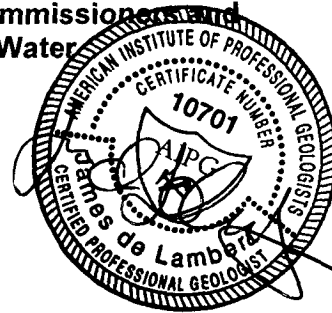
Memorandum

To: Lincoln Pipestone Rural Water - Board of Commissioners and
Dennis Healy, CEO Lincoln Pipestone Rural Water

From: Jim de Lambert, CPG – Liesch

Date: August 1, 2012

Re: LPRW – Verdi Wellfield Testing



This memorandum has been prepared to provide a brief update on the drilling activities completed on the recently acquired property near the Verdi Wellfield. Ervin Well Company was contracted for test drilling and installed five test holes on the South Dakota property between April 16 and 19, 2012. Observation wells were installed in three of the test holes to facilitate collection of water samples and water level measurements over time. An additional test hole was advanced on a separate property located north of the Verdi Wellfield in Minnesota. An observation well was also installed in this test hole. The locations for all test holes and wells drilled are shown on the attached **Figure 1**.

Test Drilling

Test holes were drilled at five locations on the recently purchased parcel in South Dakota. Eight locations were originally cleared for utility locates and five were ultimately drilled to keep the project within the established budget. These test holes, in combination with previous drilling conducted in the area, provide a sufficient level of detail to characterize the hydrogeology of the parcel.

The table below provides a comparison of the shallow aquifer depth at the existing Verdi production wells, the recently drilled test holes and the 4-inch test well installed in the southwest corner of the Verdi Wellfield. Test holes D and H encountered aquifer materials to similar depths as the existing Verdi wells and, on this basis, may represent potential production well sites. The location of the 4-inch test hole also appears favorable on the basis of aquifer depth and thickness.

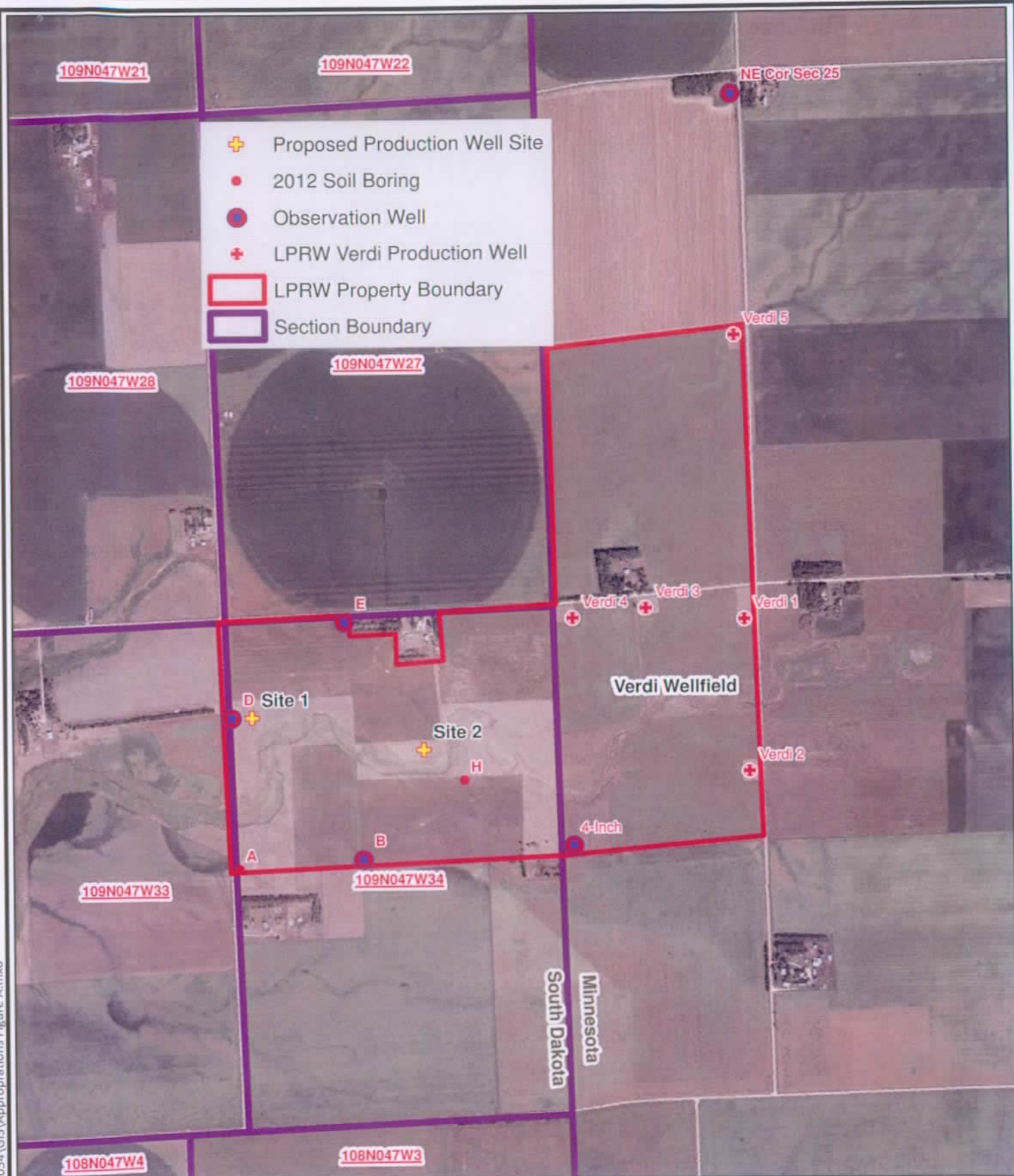
Test holes A through H encountered clayey deposits from the surface to depths ranging from five to eight feet which is generally less than that reported at existing Verdi wells. Below the surficial clay the aquifer material was generally observed to be yellow/orange in color which can be an indication of oxidization of iron compounds.

Well/Test Hole Name:	PW-1	PW-2	PW-3	PW-4	PW-5	A	B	D	E	H	4-inch	Sec 25
Aquifer Depth (ft.):	62	57.5	67	60	69	33	50	72	47	67	80	100

Note: Test Holes C, F and G were alternate locations that were not drilled

The test hole advanced in the northeast corner of section 25 appeared to be a favorable potential well site until testing indicated unacceptable water quality.

Test hole H was advanced to assess the potential for a deeper aquifer at the Verdi Wellfield. At this location, bedrock that appears to correlate with the Sioux Quartzite was encountered at a depth of 297 feet. The glacial deposits below the depth of the Verdi wells at this location do not appear favorable for development of high capacity wells.



Source: MS Virtual Earth
Projection: NAD83 UTM Zone 15N

0 500 1,000 Feet



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Hydrogeologists • Engineers • Environmental Scientists

LPRW - 2012 Exploration

LPRW Well and Boring Locations

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Figure
1

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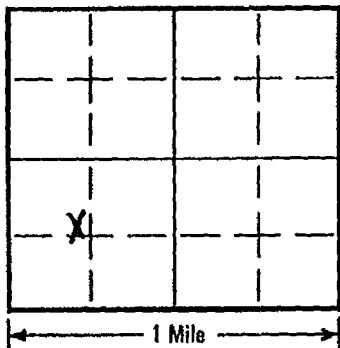
SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location 1/4 1/4 Sec 34 Twp 109N Rg 47W
 County Brookings

Please mark well location with an "X"
 Site B
 See attached map W

Well Completion Date

04/18/2012

LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
3.66 LB/FT	2" IN	0 FT	50 FT	6 1/2 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	_____	_____ lb./gal	0 ft	40 ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure Grouted from the bottom
up with a tremi line

SCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 2 IN Length 10 FEETMaterial Stainless SteelSlot Size 10 Set From 40 Feet to 50 Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION: Was well disinfected upon completion?

YES, How: _____☒ NO, Why Not? _____Laboratory sent to for water
quality analysis

Not a potable well

Well Owner: Lincoln Pipestone Rural WaterBusiness Name: SameAddress: East Hwy 14 P.O. Box 188
Lake Benton, MN. 56149

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Topsoil Brown	0	1
Sandy yellow clay	1	8
Orange/rust gravel	8	20
Rusty Sand/Gravel	20	27
Rust Gravel	27	50
Blue Clay	50	60

STATIC WATER LEVEL _____ Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____☐ Bailed _____☐ Other _____

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

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WATER RIGHTS
PROGRAMThis well was drilled under license # 684

And this report is true and accurate.

Drilling firm Ervin Well Company, Inc.

Signature of License Representative:

Dan Ervin

Signature of Well Owner or Equitable Property Holder:

Date:

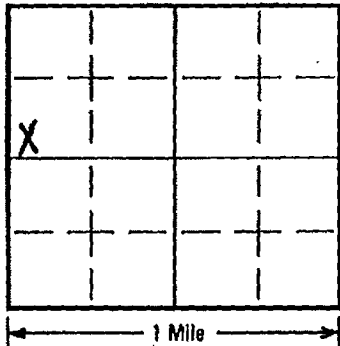
4/27/12

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location 1/4 1/4 Sec 34 Twp 109N Rg 47W
 County Brookings North

Please mark well location with an "X"
 Test Hole D
 See Attached Map W



Well Completion Date

Well Owner: Lincoln Pipestone Rural Water
 Business Name: Same
 Address: East Hwy 14 P.O. Box 188
Lake Benton, MN. 56149

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
topsoil Black	0	1
Yellow Clay	1	6
Sandy Yellow Clay	6	11
Orange rusty gravel	11	40
Orange rusty sand	40	52
Orange rusty sand/gravel	52	72
Blue sand & clay	72	74
Blue Clay	74	80

LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud rotary

CASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
3.66 LB/FT	2 IN	0 FT	61 FT	6 1/2 IN
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u> </u> IN
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u> </u> IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	<u> </u>	<u> </u> lb./gal	0 ft	57 ft
<u> </u>	<u> </u>	<u> </u> lb./gal	<u> </u> ft	<u> </u> ft

Describe grouting procedure

SCREEN: ☐ Perforated pipe ☒ Manufactured

Diameter 2 IN Length 10 FEET

Material Stainless Steel

Slot Size 10 Set From 61 Feet to 71 Feet

Other information

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material?

Describe packer(s) and location?

DISINFECTION: Was well disinfected upon completion?

 YES, How:

☒ NO, Why Not?

Laboratory sent to for water
 quality analysis

Not Potable well

STATIC WATER LEVEL 13 Feet

If flowing: closed in pressure PSI

GPM flow through inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced Flowrate GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:

☐ Bailed

☐ Other

Pumping Level Below Land Surface

 ft. After Hrs. pumped GPM

 ft. After Hrs. pumped GPM

If pump installed, pump rate GPM

REMARKS

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WATER RIGHTS
 PROGRAM

This well was drilled under license # 684

And this report is true and accurate.

Drilling firm Ervin Well Company, Inc.

Signature of License Representative:

Dan Ervin

Signature of Well Owner or Equitable Property Holder:

Date: 4/27/12

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location 1/4 1/4 Sec 34 Twp 109N Rg 47W
County Brookings

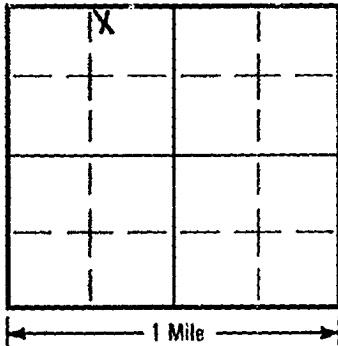
Please mark well location with an "X"

Site E

See attached Map

Well Completion Date

04/17/2012



LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
3.66 LB/FT	2 IN	0 FT	37 FT	6 1/2 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	_____	_____ lb./gal	0 ft	40 ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure Grouted from the bottom to the top with a tremi line

SCREEN: ☐ Perforated pipe ☒ Manufactured

Diameter 2 IN Length 10 FEET

Material Stainless Steel

Slot Size 10 Set From 37 Feet to 47 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: _____

Laboratory sent to for water quality analysis

X NO, Why Not? Not a Potable Well

Well Owner: Lincoln Pipestone Rural Water

Business Name: Same

Address: East Highway 14 P.O. box 188
Lake Benton, MN. 56149

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Brown Topsoil	0	1
Yellow Clay	1	5
Dirty Sand & Gravel	5	12
Yellow/Orange Gravel	12	47
Blue Clay	47	60

STATIC WATER LEVEL _____ Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____

☐ Bailed _____

☐ Other _____

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

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WATER RIGHTS
PROGRAM

This well was drilled under license # 684

And this report is true and accurate.

Drilling firm Ervin Well Company, Inc.

Signature of License Representative:

Don Ervin

Signature of Well Owner or Equitable Property Holder:

Date: 4/27/12

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location 1/4 1/4 Sec. 34 Twp 109N Rg 47W
 County Brookings

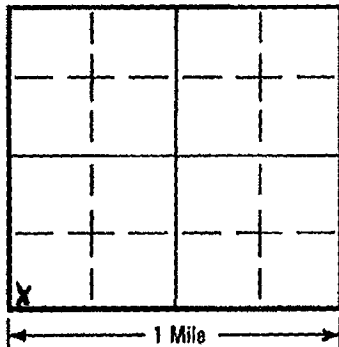
Please mark well location with an "X"

Test hole A

SEE ATTACHED MAP

Well Completion Date

04/16/2012



LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA: ☐ Steel ☐ Plastic ☐ Other

If other describe NONE

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
_____ LB/FT	_____ IN	_____ FT	_____ FT	6 1/2 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	_____	_____ lb./gal	0 ft	60 ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure Grouted with Tremi Pipe
From the bottom to the top.

SCREEN: ☐ Perforated pipe ☐ Manufactured NONE

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION: Was well disinfected upon completion?

YES. How: _____

X NO, Why Not? _____

Laboratory sent to for water
 quality analysis

HOLE Sealed

Well Owner: Lincoln Pipestone Rural Water

Business Name: Same

Address: East Hwy 14 P.O. Box 188
Lake Benton, MN 56149

WELL LOG:

DEPTH

FORMATION	FROM	TO
Clay Yellow	0	4
Sandy yellow clay	4	7
Yellow Gravel	7	13
Yellow Sand	13	14
Yellow Sand/Gravel	14	29
Sand Yellow	29	33
Green/Blue Clay	33	52
Gray Clay	52	60

STATIC WATER LEVEL _____ Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____

☐ Bailed _____

☐ Other _____

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

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This well was drilled under license # 684

And this report is true and accurate.

Drilling firm Ervin Well Company, Inc.

Signature of License Representative:

Dan Ervin

Signature of Well Owner or Equitable Property Holder:

Date: 4/27/12

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location 1/4 1/4 Sec 34 Twp 109N Rg 47W
County Brookings

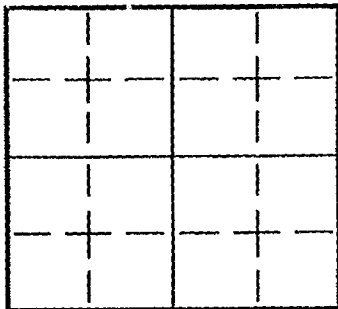
Please mark well location with an "X"

Site H

See attached map

Well Completion Date

04/18/2012

Well Owner: Lincoln Pipestone Rural WaterBusiness Name: SameAddress: East hwy 14 P.O. Box 188
Lake Benton, MN. 56149

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Brown Topsoil	0	1
Yellow Clay	1	5
Gravel	5	17
Sand	17	30
Gravel/Sand	30	61
Clean Sand	61	67
Clay Blue	67	73
Silty sand	73	74
Clay Gray	74	92

Continued on next page

STATIC WATER LEVEL _____ Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____☐ Bailed _____☐ Other _____

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

RECEIVED

AUG 08 2012

WATER RIGHTS PROGRAM

This well was drilled under license # 684

And this report is true and accurate.

Drilling firm Ervin Well Company, Inc

Signature of License Representative:

Don Ervin

Signature of Well Owner or Equitable Property Holder:

4/27/12Date: 4/27/12

LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA: ☐ Steel ☐ Plastic ☐ OtherIf other describe NONE

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
_____ LB/FT	_____ IN	_____ FT	_____ FT	<u>6 1/2</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Bentonite</u>	_____	_____ lb./gal	<u>0</u> ft	<u>297</u> ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure Grouted from the bottom to the top with tremi lineSCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION: Was well disinfected upon completion?

_____ YES, How: _____

Laboratory sent to for water quality analysis

X NO, Why Not? The hole was sealed

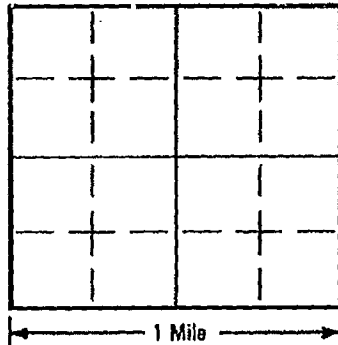
SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location Sec 34 Twp 109N Rg 47W
County North

Brookings
Please mark well location with an "X"
Site H
See attached map^W

Well Completion Date
04/18/2012



LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud rotary

CASING DATA: ☐ Steel ☐ Plastic ☐ Other

If other describe NONE

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u>6 1/2</u> IN
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u> </u> IN
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u> </u> IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Bentonite</u>	<u> </u>	<u> </u> lb./gal	<u>0</u> ft.	<u>297</u> ft.
<u> </u>	<u> </u>	<u> </u> lb./gal	<u> </u> ft.	<u> </u> ft.

Describe grouting procedure Grouted from the bottom to the top with tremi line

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter IN Length FEET

Material

Slot Size Set From Feet to Feet

Other information

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material?

Describe packer(s) and location?

DISINFECTION: Was well disinfected upon completion?

 YES, How:

Laboratory sent to for water quality analysis

X NO, Why Not? This hole sealed

Well Owner: Lincoln Pipestone Rural Water

Business Name: Same

Address: E hwy 14 P.O. Box 188
Lake Benton, MN. 56149

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Fine dirty gray sand	92	96
Gray/Blue Clay	96	105
Yellow Firm Clay	105	113
Tan/Yellow Clay	113	140
Gray Clay	140	180
Sandy Gray Clay	180	187
Gray Clay	187	227
Silt	227	228
Tan Clay	228	240

Continued on next Page

STATIC WATER LEVEL Feet

If flowing: closed in pressure PSI

GPM flow through inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced Flowrate GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:

☐ Bailed

☐ Other

Pumping Level Below Land Surface

 ft. After Hrs. pumped GPM

 ft. After Hrs. pumped GPM

If pump installed, pump rate GPM

REMARKS

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AUG 08 2012

WATER RIGHTS PROGRAM

This well was drilled under license # 684

And this report is true and accurate.

Drilling firm Ervin Well Company, Inc.

Signature of License Representative:

Dan Ervin

Signature of Well Owner or Equitable Property Holder:

Date: 4/27/12

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location $\frac{1}{4}$ $\frac{1}{4}$ Sec Twp 109N Rg 47W
 County 34 North

~~XXXXXX~~

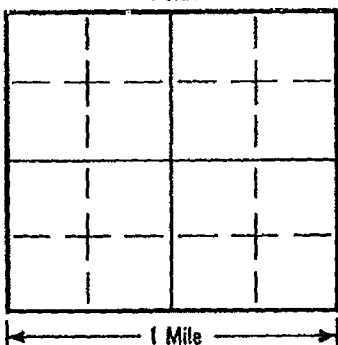
Brookings

Please mark well location with an "X"

Site H

See attached map

Well Completion Date



LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA: ☐ Steel ☐ Plastic ☐ OtherIf other describe NONE

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u>6 1/2</u> IN
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u> </u> IN
<u> </u> LB/FT	<u> </u> IN	<u> </u> FT	<u> </u> FT	<u> </u> IN

GROUTING DATA

Grout Type Bentonite No. of Sacks Grout Weight lb./gal 0 From 0 ft. To 297 ft.
 lb./gal ft. 297 ft.

Describe grouting procedure Grouted from the bottom to the top with a tremi line

SCREEN: ☐ Perforated pipe ☐ ManufacturedDiameter IN Length FEETMaterial Slot Size Set From Feet to FeetOther information WAS A PACKER OR SEAL USED? ☐ YES ☒ NOIf so, what material? Describe packer(s) and location?

DISINFECTION: Was well disinfected upon completion?

YES, How:

Laboratory sent to for water quality analysis

X NO, Why Not? Hole wasSealedWell Owner: Lincoln Pipestone Rural WaterBusiness Name: SameAddress: E Hwy 14 P.O. Box 188Lake Benton, MN. 56149

WELL LOG:

DEPTH

FORMATION	FROM	TO
Light Gray Clay	240	257
Tan/Red Clay	257	260
Pink Clay	260	267
Silty Pink Clay	267	272
Pink Clay	272	285
Pink Clay	285	292
Sioux Quarts	292	297

STATIC WATER LEVEL FeetIf flowing: closed in pressure PSIGPM flow through Inch pipeControlled by ☐ Valve ☐ Reducers ☐ Other Reduced Flowrate GPMCan well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe: ☐ Bailed ☐ Other

Pumping Level Below Land Surface

 ft. After Hrs. pumped GPM ft. After Hrs. pumped GPMIf pump installed, pump rate GPM

REMARKS

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WATER RIGHTS PROGRAM

This well was drilled under license # 684

And this report is true and accurate.

Drilling firm Ervin Well Company, Inc. 1383

Signature of License Representative:

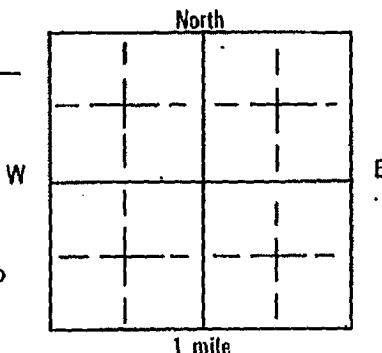
Don Ervin

Signature of Well Owner or Equitable Property Holder:

Date: 4/27/12

SOUTH DAKOTA WELL AND TEST HOLE PLUGGING REPORT

10-85

Location 1/4 1/4 Sec 34 Twp 109N Rg 47WCounty
BrookingsPlease mark well
location with
an "X"Site A
See attached map

Well Owner:

Name Lincoln Pipestone Rural WaterAddress East Hwy 14 P.O. Box 188Lake Benton, MN. 56149Plugging completion Date 04/16/2012

CHECK APPROPRIATE BOX

EXISTING WELL ☐TEST HOLE ☒

Well depth _____

Casing material _____

Casing size(s) _____

Casing condition _____

Hole depth 60Hole size 6 1/4Describe plugging procedure: Grouted Hole with benonite from the bottom upWith a tremi lineDescribe grout or plugging material: Bentonite Grout

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WATER RIGHTS
PROGRAM

Type of non-slip plug: _____

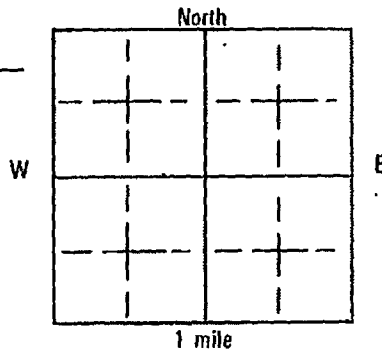
This well or test hole was plugged under license # 684 And this report is true and accurate.Drilling firm Ervin Well Company, Inc.Signature of Licensed Representative Don Ervin

Signature of Well Owner _____

Date 4/27/12

SOUTH DAKOTA WELL AND TEST HOLE PLUGGING REPORT

10-85

Location 1/4 1/4 Sec 34 Twp 109N Rg 47WCounty
BrookingsPlease mark well
location with
an "X"

Well Owner:

Name Lincoln Pipestone Rural WaterAddress East Hwy 14 P.O. BOX 188Lake Benton, MN. 56149Plugging completion Date 04/18/2012

CHECK APPROPRIATE BOX

EXISTING WELL ☐TEST HOLE ☒

Well depth _____

Hole depth 297

Casing material _____

Hole size 6 1/4

Casing size(s) _____

Casing condition _____

Describe plugging procedure: Grouted hole with bentonite grout from the bottom
to the top with a tremi lineDescribe grout or plugging material: Bentonite grout

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PROGRAM

Type of non-slip plug: _____

This well or test hole was plugged under license # 684 And this report is true and accurate.Drilling firm Ervin Well Company, Inc.Signature of Licensed Representative Don Ervin

Signature of Well Owner _____

Date 4/27/12



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SD Property

109N047W28

109N047W27

109N047W33

109N047W34

Verdi Wellfield

2008
D. Williams
Circles

عليه السلام

3. $\frac{1}{2}$ of 100

Test How

Lab.
ATP Synthase

02

52

5

5

24

12

1

Legend

Proposed Test Holes	LPRW Verdi Wells
	

Source: MS Virtual Earth
Projection: NAD83 UTM Zone 14N

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Mar 12

LPRW 2012 Exploration

Figure 1

Property Location

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 8/8, 20 12

RECEIVED OF Lincoln Pipestone Rural Water PO Box 188 Lake Benton MN 56149

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

Fee for Application for Permit No. <u>7392-3</u> to Appropriate Water, to construct and to put water to beneficial use	1150	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>7392-3</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	1350 00

No. **05524**

By Charles Erbe
Chief Engineer

Lincoln Pipestone Rural Water

East Highway 14, Box 188
Lake Benton, Minnesota 56149-0188
(507) 368-4248 or (800) 462-0309
FAX: (507) 368-4573
MINNESOTA RELAY: 771 or 1-800-627-3529
Email: lprw@itctel.com

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WATER RIGHTS
PROGRAM

August 3, 2012

Mr. Eric Gronlund
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre SD 57501

RE: Lincoln Pipestone Rural Water – Verdi Wellfield

Dear Mr. Gronlund:

Enclosed please find two applications for appropriation of groundwater from the shallow aquifer near Lincoln Pipestone Rural Water's (LPRW) Verdi Wellfield. The Verdi Wellfield is LPRW's primary water source in terms of production and is the only water source that does not require any treatment to meet state and federal standards or the needs of our users. For these reasons, and the fact that the wellfield is centrally located in LPRW's service area, this water source is critical to LPRW.

LPRW purchased the parcel of land directly west of the existing wellfield early in 2012 and test drilling was conducted during the spring of 2012. The results of the test drilling (South Dakota Water Well Completion Reports are attached) indicate that at least two potential well sites are available but the quality of the water may require treatment for iron and manganese. LPRW currently plans to install a new raw water line from the proposed well sites in South Dakota to the Verdi Pumping Station where iron and manganese removal facilities will be constructed. LPRW's existing Well 5, located in Minnesota, will also be connected to this raw water line as we currently need to blend the water from this well to maintain acceptable levels of iron and manganese for distribution.

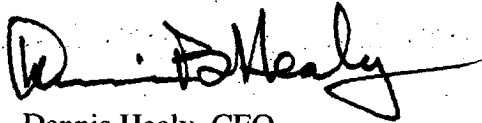
The first application is for appropriation of water from two wells, which will be used to provide raw water to the Verdi Pumping Station for treatment and distribution to LPRW customers. LPRW is requesting an annual volume of up to 614 acre feet (200 million gallons per year) under this permit. We anticipate that each well will be equipped to operate at rates of up to 600 gallons per minute (gpm) and we expect to normally operate one well to obtain the authorized volume of water with the other well in a standby position. Under emergency conditions it may be necessary to operate both wells for limited periods of time, so the maximum requested rate of appropriation is 1200 gpm. Regardless of the instantaneous rate, LPRW will limit annual pumping to the volume authorized by the permit.

In addition, LPRW is projecting increased demand for water within the LPRW service area and we are currently searching for new sources of water supply. Depending on the success of these efforts, LPRW may need to develop additional supply in the Verdi area. For this reason we are submitting a second application for a future use permit to reserve an additional 614 acre feet per year for use by LPRW.

Along with the applications (two of each are enclosed) we have enclosed the appropriate fees, a summary of the test drilling conducted by LPRW during the spring of 2012, a map showing the proposed production well locations and the location of the property owned by LPRW including the existing and proposed LPRW facilities.

Please process our applications at the earliest opportunity and advise if any additional information is required. If you have questions or require further information please contact me.

Sincerely,
Lincoln Pipestone Rural Water



Dennis Healy, CEO

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Increment	Permit Application Cost	Future Use Application Cost
First 120 acre feet per year (\$500.00)	\$500.00	\$50.00
Second 120 acre feet per year (\$250.00)	\$250.00	\$25.00
4 additional 120 acre feet per year increments (\$100.00)	\$400.00	\$40.00
Final Inspection/Licensing Fee (\$200.00)	\$200.00	-
Totals	\$1,350.00	\$115.00



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

October 23, 2012

Skip Wright, Regional Hydrologist
Minnesota Dept of Natural Resources
261 Highway 15 South
New Ulm MN 56073

Dear Mr. Wright:

Enclosed is a copy of the report, recommendation and public notice for South Dakota Water Permit Application No. 7392-3 and Future Use Permit Application No. 7393-3 filed by Lincoln Pipestone Rural Water. The public notice is scheduled to be published October 31, 2012 in the Brooking Register.

If you have any questions regarding the review of the applications please contact the SD Water Rights Program at (605) 773-3352.

Sincerely,

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

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7392-3, Lincoln Pipestone Rural Water**

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. 7392-3, Lincoln Pipestone rural Water, c/o Dennis Healy, E Hwy 14, Box 18, Lake Benton MN 56149.

The Chief Engineer is recommending APPROVAL of Application No. 7392-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 7392-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Water Permit No. 7392-3 authorizes a total annual diversion of 614 acre feet of water annually.
4. Lincoln Pipestone Rural Water shall report to the Chief Engineer annually the amount of water withdrawn from the Aurora Management Unit of the Big Sioux Aquifer.

See report on application for additional information.

Garland Erbele, Chief Engineer
October 23, 2012

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7392-3
AND
FUTURE USE PERMIT APPLICATION NO. 7393-3
LINCOLN PIPESTONE RURAL WATER
SEPTEMBER 17, 2012

Water Permit Application No. 7392-3 proposes to appropriate 614 acre-feet annually (ac-ft/yr) at a maximum diversion rate of 2.67 cubic feet of water per second (cfs) from two wells to be completed into the Aurora management unit of the Big Sioux aquifer. The proposed wells are to be approximately 70 feet deep and located in the N½ Section 34, T109N-R47W. Water will be used by the rural water system to supply users in Lincoln, Lyon, Murray and Pipestone Counties in Minnesota.

Future Use Permit Application No. 7393-3 proposes to appropriate and reserve for future use 614 ac-ft/yr from the Aurora management unit of the Big Sioux aquifer. The area to be reserved for future water use is to be located in the N½ of Section 34, T109N-R47W. The water is to be reserved for the purpose of providing future water supplies to the rural water system to serve users in Lincoln, Lyon, Murray and Pipestone Counties in Minnesota. This application does not authorize construction of works or the application of water to beneficial use.

South Dakota Codified Law (SDCL) 46-1-13

Pursuant to SDCL 46-1-13, "A water right may be granted for uses outside this state on the same basis and subject to the same terms and conditions as water rights are granted to persons for use of water within this state..."

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.

SDCL 46-2A-10

Pursuant to SDCL 46-2A-10, A reservation for a future use may be approved only if there is a reasonable probability that unappropriated water is available for appropriation, that the quantity of water reserved will be needed by the entity and that the proposed use will be a beneficial use and in the public interest.

The Water Management Board has consistently found that the use of water for a rural water system is a beneficial use of water and in general is in the public interest. This report will address the availability of unappropriated water and existing rights from a sub-unit of the Aurora management unit of the Big Sioux aquifer and if the quantity of water to be reserved for future use will be needed by Lincoln Pipestone Rural Water.

AQUIFER: Aurora Management Unit of the Big Sioux Aquifer (BS: A)

AQUIFER CHARACTERISTICS:

The Big Sioux aquifer is a major glacial-drift aquifer consisting of alluvium-mantled outwash (silt, fine to coarse sand and gravel) that extends over most of the length of the Big Sioux River basin along the Big Sioux River and its tributaries. The Aurora management unit of the Big Sioux aquifer underlies approximately 83,000 acres of southeastern Brookings and northwestern Moody Counties, South Dakota and western Lincoln and Pipestone Counties, Minnesota (see figure 1) (Anderson, 1976; Hamilton, 1989; Hanson, 1986; and Hedges and others 1982). The potentiometric surface map for the Big Sioux aquifer identifies an area, approximately in the center of T109N-R47W (near Elkton), where groundwater north of the area flows to the west and groundwater south of the area flows to the southwest (Hamilton, 1989). This groundwater divide produces an area that is isolated from the main body of the aquifer, essentially creating a sub-unit of the Big Sioux: Aurora aquifer. The sub-unit of the Big Sioux: Aurora aquifer which contains the well sites proposed by Application No. 7392-3 and the area to be reserved for future use by Future Use Permit Application No. 7393-3 encompasses approximately 20,000 acres and is shown in figure 1.

The Aurora management unit is a surficial aquifer under unconfined conditions in this area (Hamilton, 1989). Test wells and test holes completed for the applicant indicate the depth to the top of the aquifer is 5-11 feet below ground surface and the thickness of aquifer material ranges from 26-61 feet.

WATER AVAILABILITY:

Water Permit Application No. 7392-3 proposes to appropriate 614 ac-ft/yr and Future Use Permit Application No. 7393-3 proposes to reserve 614 ac-ft/yr from the Aurora management unit of the Big Sioux aquifer. The probability of unappropriated water available from the aquifer can be evaluated by considering SDCL 46-6-3.1 which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source."

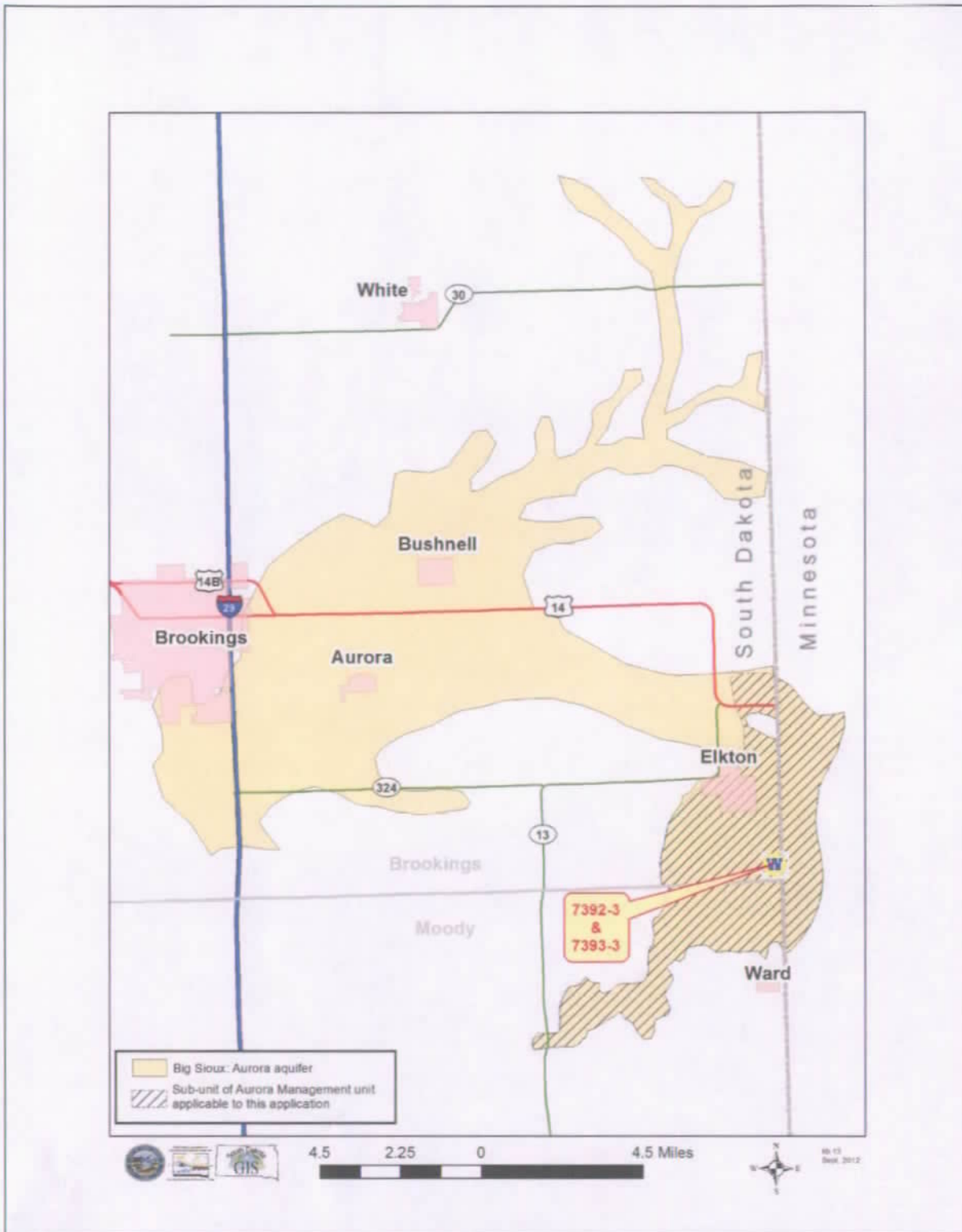


Figure 1. The extent of the Big Sioux: Aurora aquifer, the sub-unit of the Aurora management unit applicable to these applications, the location of the well sites proposed by Application No. 7392-3 and the area proposed by Future Use Permit Application No. 7393-3. Modified from (Anderson, 1976; Hamilton, 1989; Hanson, 1986; and Hedges and others 1982)

Recharge versus Discharge:

Recharge:

Recharge to the Big Sioux: Aurora aquifer in this area is by infiltration of precipitation and seepage from Spring Creek and its tributaries. The average annual recharge rate to the Big Sioux: Aurora aquifer was estimated to be 5.0 inches per year based on observation well analysis (Hedges and others, 1985). Hedges and others (1985) also reported a computer model analysis "best fit" recharge rate for the Aurora management unit, of 3.6 inches per year. A finite-difference method digital model used to simulate the Big Sioux aquifer in Brookings and Hamlin Counties (Koch, 1980), did not include the sub-unit of the Big Sioux: Aurora aquifer that contains the sites proposed by these applications, but modeled an area within approximately five miles of this well sites. The model used an average annual recharge rate of 6.57 inches per year to the water table portion of the Big Sioux aquifer, to simulate steady state conditions using average annual water levels for 1970-1976 as the potentiometric head in the aquifer (Koch, 1980). The average annual recharge to the sub-unit of the Big Sioux: Aurora aquifer that contains the sites proposed by these applications, based on the recharge rate estimates is shown in Table 1.

IVESTIGATOR	RECHARGE RATE (inches per year)	AVERAGE ANNUAL RECHARGE Assuming aquifer area = 20,000 acres (acre-feet per year)
Hedges and others, 1985, (Observation well analysis)	5.0	8,333
Hedges and others, 1985, (Computer model "best fit")	3.6	6,000
Koch, 1980	6.57	10,950

Table 1. Estimated average annual recharge to the sub-unit of the Big Sioux: Aurora aquifer that contains the well site proposed by this application

Discharge:

Discharge from the sub-unit of the Big Sioux: Aurora aquifer that contains the sites proposed by these applications occurs through evapotranspiration, seepage to Spring Creek and its tributaries and well withdrawals. Wells withdrawals are for domestic use (expected to be minor) and appropriative uses including irrigation and rural water system use. South Dakota Water Rights/Permits appropriating water from this sub-unit of the Big Sioux: Aurora aquifer are shown in Table 2 and in Figure 2. In addition, the Lincoln Pipestone Rural Water System maintains a well field known as the Verdi Well Field consisting of five production wells completed into this aquifer just east of the Minnesota/South Dakota border. Lincoln Pipestone Rural Water System is currently permitted through the State of Minnesota for combined maximum withdrawals of 683 MGY (2,096.05 acre-feet per year) (Healy).

PERMIT NO	NAME	STATUS	USE	CFS	ACRES
2332-3	HEARTLAND HBI	IL	IRR	NA	NA
2574-3	LOWELL CHRISTENSEN	LC	IRR	1.31	92
3185-3	WITTE AG PARTNERSHIP #1	LC	IRR	1.41	99
3496-3	MINNIE VAN DYKE	LC	IRR	0.52	37
4038-3	CITY OF ELKTON	LC	MUN	0.72	NA
4295-3	LARRY W MOULTON	IL	IRR	NA	NA
4295-3A	ALICE MOULTON	LC	IRR	1.34	136
4332-3	ALICE MOULTON	LC	IRR	1.34	125
4523-3	JAMES STUEFEN	LC	IRR	1	71
4726-3	WITTE AG PARTNERSHIP #3	LC	IRR	1.56	115
4763-3	MARY ELLEN MCGILL TRUST	LC	IRR	2.44	234
4877-3	LARRY O/CAROL J OLSON	IL	IRR	NA	NA
5558-3	LARRY OLSON	IL	IRR	NA	NA
5558A-3	LARRY OLSON	LC	IRR	1.78	268
5804-3	HEARTLAND HBI	LC	IRR	1.78	177
658-3	HEARTLAND HBI	IL	IRR	NA	NA
7178-3	JOS FAMILY FARMS	PE	IRR	4.44	400
7219-3	ELKTON SCHOOL DISTRICT	PE	IRR	0.178	2.3
7228-3	JOS FAMILY FARMS	PE	IRR	1.71	120
7317-3	JOS FAMILY FARMS	PE	IRR	1.78	180
LC= Water Right, IL= Incorporated, PE= Water Permit, IRR= Irrigation, MUN= Municipal					

Table 2. Water Rights/Permits appropriating water from the sub-unit of the Big Sioux: Aurora aquifer that contains the well sites proposed by this application (Water Rights, 2012c)

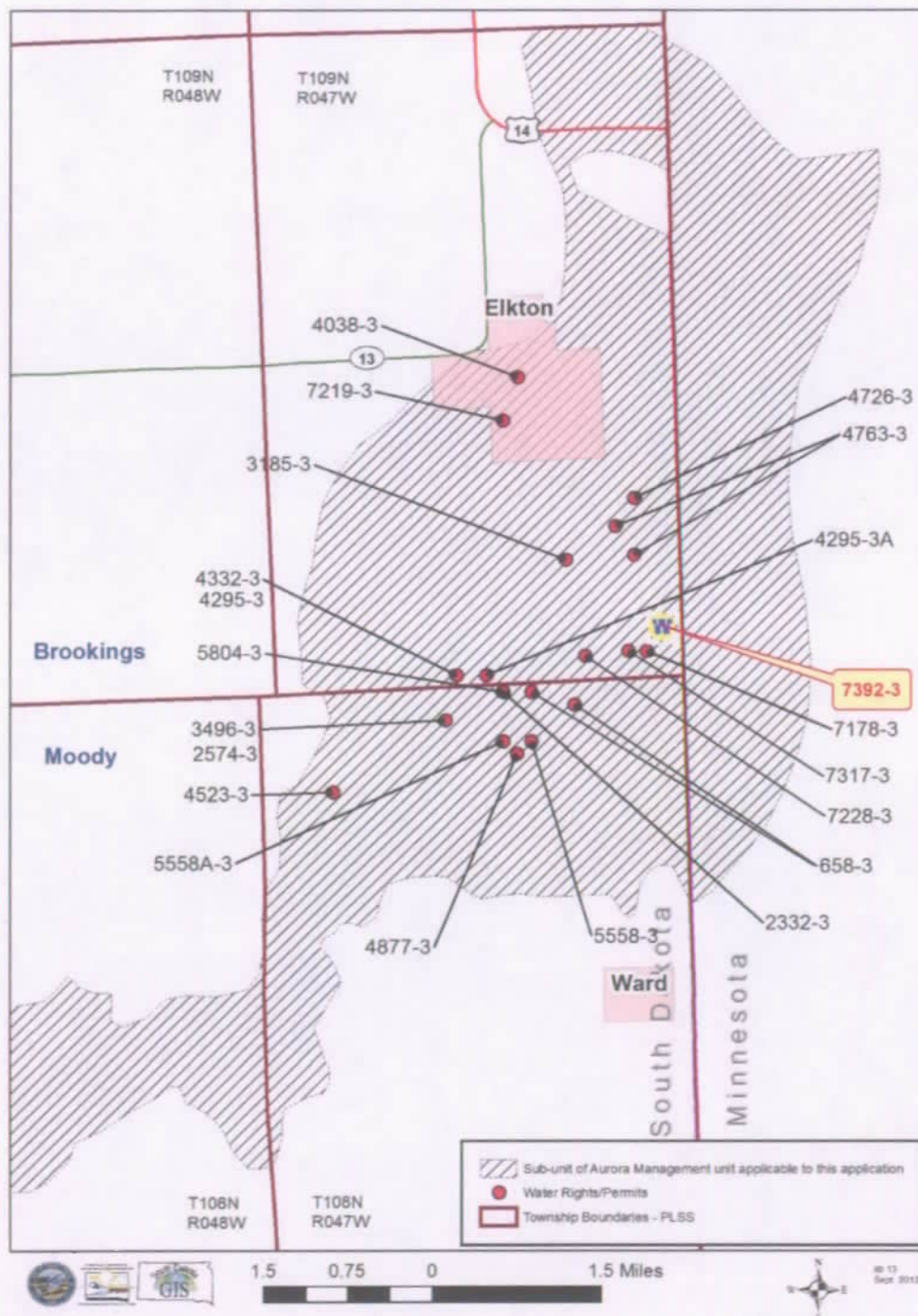


Figure 2. Water Rights/Permits appropriating water from the sub-unit of the Big Sioux: Aurora aquifer that contains the well sites proposed by this application (Water Rights, 2012c)

The City of Elkton has been supplied by Brookings-Deuel Rural Water System since 1991 and maintains Water Right No. 4038-3 as a backup source only (Friedeman). Therefore, irrigation use is the only appropriate water use from this aquifer in South Dakota. The irrigation use from the sub-unit of the Big Sioux: Aurora aquifer that contains the sites proposed by these applications is shown in table 3

YEAR	ACRES IRRIGATED	ACRE-FEET PUMPED	APPLICATION RATE (in/yr)
1979	661	281.83	5.12
1980	396	228.12	6.91
1981	737	404.1	6.58
1982	958	421.88	5.28
1983	1247	686.73	6.61
1984	1040	487.1	5.62
1985	1125	515.7	5.50
1986	798	163.6	2.46
1987	966	437.6	5.44
1988	1176	1025.3	10.46
1989	1193	739.9	7.44
1990	1302	607	5.59
1991	1161	605	6.25
1992	654	167.86	3.08
1993	450	131.9	3.52
1994	1368.8	461.07	4.04
1995	548	153.13	3.35
1996	1075.8	398	4.44
1997	1164.8	862	8.88
1998	1378.8	1322.4	11.51
1999	1094.8	545.55	5.98
2000	1366.6	796.12	6.99
2001	1316.8	1161.53	10.59
2002	1389.8	1078.25	9.31
2003	1290.8	1193.3	11.09
2004	1036.8	813.01	9.41
2005	1068	347.88	3.91
2006	1350	835.11	7.42
2007	1354	946.59	8.39
2008	1354	1040.27	9.22
2009	1031	549.27	6.39
2010	857	165.28	2.31
2011	1843	569.7	3.71

Table 3. Irrigation use from the sub-unit of the Big Sioux: Aurora aquifer that contains the well site proposed by this application (Water Rights, 1980-2012a; and Water Rights, 1980-2012b)

There are currently 2,056.3 acres authorized for irrigation by South Dakota water rights/ permit from this aquifer. At the average application rate of 6.45 inches per year, the average annual withdrawal for irrigation can be expected to be approximately 1,105.3 acre-feet annually.

In addition to domestic use of water from the Minnesota portion of this aquifer, the only other water user is the Lincoln Pipestone Rural Water System (Youngsma). Well withdrawals from the Lincoln Pipestone Rural Water System Verdi well field are shown in Table 4. The system is estimating 2012 withdrawals will be 445 million gallons per year (MGY) (1,365.7 acre-feet).

YEAR	MGY	ACRE- FEET/YR
2005	330.61	1014.6
2006	396.872	1218.0
2007	421.389	1293.2
2008	415.044	1273.7
2009	386.915	1187.4
2010	404.493	1241.3
2011	440.089	1350.6

Table 4. Withdrawals from the Lincoln Pipestone Rural Water System Verdi well field (Healy)

Assuming the LPRWS will fully develop their Minnesota permit 683 MGY (2,096.05 acre-feet per year), the total of the well withdrawals from the sub-unit of the Big Sioux: Aurora aquifer that contains the well sites proposed by Application No. 7392-3 and the future use area proposed by Future Use Permit Application No. 7393-3 is expected to be approximately 3,200 acre-feet per year under current appropriations.

A comparison between the estimated average annual recharge (see Table 1) and the estimated average annual well withdrawals indicates that there is currently at least 2,800 ac-ft/yr unappropriated water from this sub-unit of the Big Sioux: Aurora aquifer.

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 to the aquifer”.

The DENR-Water Rights Program monitors one observation well, BG-78H, located approximately one mile southwest of the sites proposed by these applications (Water Rights, 2012a). A hydrograph for the observation well is shown in Figure 3.

The hydrograph shows that although the potentiometric surface in the sub-unit of the Big Sioux: Aurora aquifer that contains the sites proposed by these applications fluctuates with the climate, the amount of water in the aquifer has trended upward by approximately 0.438 inches per year over the period of record. Most importantly, the observation well data shows that at the current level of development, climatic conditions greatly mask the temporal effects of well withdrawals. Therefore, the observation well data documents that recharge to and natural discharge from this aquifer significantly exceeds pumping. The hydrograph documents that there is unappropriated water available from the aquifer to support this appropriation.

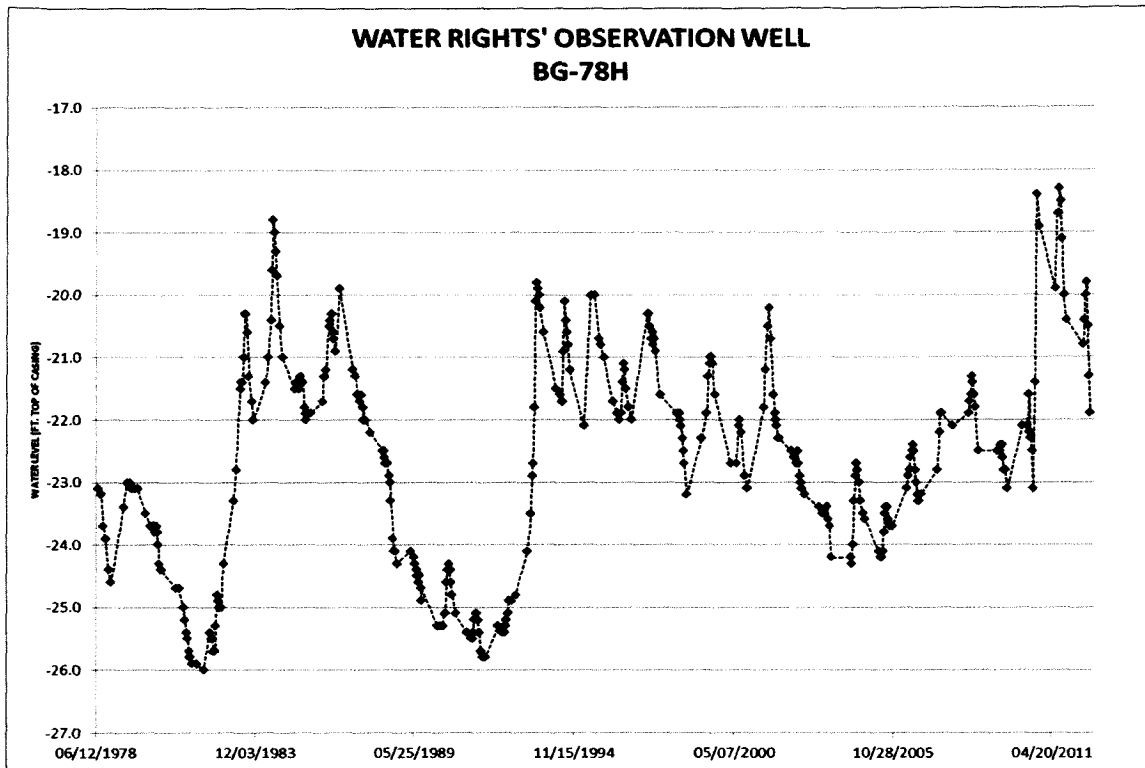


Figure 3. Hydrograph for an observation well completed into the sub-unit of the Big Sioux: Aurora aquifer located approximately one mile southwest of the well sites proposed by these applications.

EXISTING WATER RIGHTS:

The existing South Dakota appropriations from the sub-unit of the Big Sioux: Aurora aquifer that contains the well sites proposed by this application are shown in Table 2 and in Figure 2. The nearest water permit, No. 7178-3, Jo's Family Farms, appropriates 4.44 cfs from three wells approximately 60 feet deep, located in the S½ of Section 34, T109N-R47W. Test holes submitted with Application No. 7178-3 and Application No. 7392-3, along with test holes and completion reports on file with the DENR-Water Rights Program (Water Rights, 2012b); indicate as much as 61 feet of aquifer material consisting mainly of gravel in this area. The saturated thickness of the aquifer in this area appears to exceed 40 feet in places. The transmissivity of the Big Sioux: Aurora aquifer as a whole ranges from 20,000 to 42,000 ft²/d (Hamilton, 1989) and this sub-area of the aquifer should be no exception. "The effects of withdrawals from wells that tap the Big Sioux aquifer generally are small because of extensive recharge and unconfined conditions. Drawdown of water levels is temporary and a few feet at most at a distance of about a mile from large-capacity wells." (Hamilton, 1989). The observation well hydrograph (see Figure 3) verifies that drawdown from nearby irrigation wells is not significant. If Application No. 7392-3 is approved, well interference is not expected to be an issue and there is a reasonable probability that existing users will not be unlawfully impaired.

NEED FOR FUTURE USE RESERVATION:

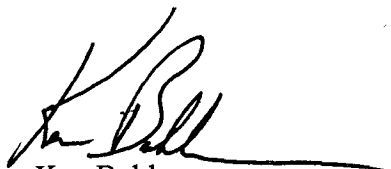
Lincoln Pipestone Rural Water's application includes a statement that "LPRW is projecting increased demand for water within the LPRW service area and we are currently searching for new sources of water supply. Depending on the success of these efforts, LPRW may need to

develop additional supply in the Verdi area. For this reason we are submitting a second application for a future use permit to reserve an additional 614 acre feet per year for use by LPRW.”

The applicant submitted a draft “framework study of water source alternatives” prepared by their consultant. That study includes an alternative for the addition of approximately 1600 gpm of capacity that would likely need to be located in South Dakota.

CONCLUSIONS:

1. Water Permit Application No. 7392-3 proposes to appropriate 614 acre-feet annually at a maximum diversion rate of 2.67 cubic feet of water per second from two wells to be completed into a sub-unit of the Aurora management unit of the Big Sioux aquifer.
2. SDCL 46-1-13 allows water rights to be granted for uses outside the state.
3. Future Use Permit Application No. 7393-3 proposes to reserve for future use 614 ac-ft/yr from a sub-unit of the Aurora Management Unit of the Big Sioux aquifer.
4. The sub-unit of the Aurora management unit of the Big Sioux aquifer this application proposes to appropriate water from underlies approximately 20,000 acres of Brookings and Moody Counties, South Dakota; and Lincoln and Pipestone Counties, Minnesota.
5. There is a reasonable probability that unappropriated water is available from this aquifer for the appropriation proposed by Application No. 7392-3 and the future use reservation proposed by Future Use Permit Application No. 7393-3.
6. There is a reasonable probability that this appropriation can be developed without unlawful impairment of existing rights.
7. It is not clear if the proposed future use reservation or a portion of the reservation is needed by the applicant.



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Anderson, H.W., 1976, Water Resources of the Rock River Watershed, Southwestern Minnesota: U.S. Geological Survey Hydrologic Atlas 555, 14 maps on 3 sheets
- Hamilton, L.J., 1989, Water Resources of Brookings and Kingsbury Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report: 88-4185, 82 p.
- Hanson, D.S., 1986, Water Resources of Lake and Moody Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 84-4209, 51 p.
- Healy, Dennis. “Verdi well field into.” Email to Ken Buhler. 12 Sept. 2012

- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A., 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Hedges, L.S., Allen, J., Holly D.E., 1985, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Koch, N.C., 1980, Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations 80-100, 46 p.
- Friedeman, Barbara, Environmental Scientist II, South Dakota Department of Environment and Natural Resources. Personal interview. 14 Sept. 2012
- Koch, N.C., 1980, Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota: U.S. Geological Survey Water Resources Investigations 80-100, 46 p.
- Water Rights, 1980-2012a, Irrigation Questionnaires 1980-2011, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 1980-2012b, Irrigation Questionnaire Summaries 1980-2011, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2012a, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2012b, Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2012c, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Youngsma, Lucas. CFM. Area Hydrologist, Minnesota DNR. telephone interview. 14 Sept. 2012

RECEIVED

NOV - 5 2012

WATER RIGHTS
State of South Dakota

Affidavit of Publication

ss

County of Brookings

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

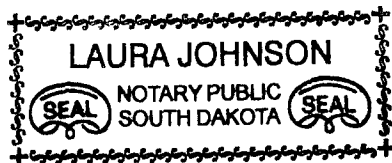
Leg#753 Notice on App to Appropriate Water

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

October 31, 2012

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

thirty-three dollars and eight cents \$33.08



Laura Johnson

1st _____ day of

November _____

2012

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

Chaylee Duis

Legal 753, 1x, 10/31
NOTICE OF APPLICA-
TION NOS. 7392-3 and
7393-3

Notice is given that Lincoln Pipestone Rural Water, c/o Dennis Healy, E Hwy 14, Box 18, Lake Benton MN 56149 has filed the following applications.

Application No. 7392-3 proposes to appropriate 2.67 cubic feet of water per second (614 acre-feet annually) from two wells to be completed into the Big Sioux:Aurora Aquifer (70 feet deep) located in the N 1/2 Section 34-T109N-R47W for rural water system use. Lincoln Pipestone Rural Water serves users in Lincoln, Lyon, Murray and Pipestone Counties in Minnesota.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7392-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest.

Future Use Application No. 7393-3 proposes to appropriate and reserve 614 acre-feet of water annually from the Big Sioux:Aurora Aquifer. The area to be reserved for future water use is to be located in the N 1/2 Section 34-T109N-R47W. The water is to be reserved for the purpose of providing future water supplies to the rural water system to serve those users listed above. This application does not authorize construction of works or application of water to beneficial use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Future Use Application No. 7393-3 because 1) there is reasonable probability that there may be development of the water reserved under this permit 2) Lincoln Pipestone Rural Water has demonstrated a reasonable need for the water reserved by this permit, 3) the proposed use will be a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition. Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)% and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 12, 2012. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to these applications. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$33.08.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

October 23, 2012

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7392-3 and 7293-3 to Appropriate Water. Please publish the notice once on October 31, 2012. 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 Lincoln Pipestone Rural Water, c/o Dennis Healey, E Hwy 14, Box 18, Lake Benton MN 56149 (Ph # 507-368-4248).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

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

October 23, 2012

Lincoln Pipestone Rural Water
Dennis Healy
W Hwy 14 Box 18
Lake Benton MN 56149

Dear Mr. Healy:

Water Permit Application Nos. 7392-3 and 7393-3 for rural water system use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Brookings Register printed at Brookings SD (Ph # 605-692-6271). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

A handwritten signature in cursive script that reads "Eric Gronlund".

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish the Notice on October 31, 2012. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NOS. 7392-3 and 7393-3

Notice is given that Lincoln Pipestone Rural Water, c/o Dennis Healy, E Hwy 14, Box 18, Lake Benton MN 56149 has filed the following applications.

Application No. 7392-3 proposes to appropriate 2.67 cubic feet of water per second (614 acre-feet annually) from two wells to be completed into the Big Sioux:Aurora Aquifer (70 feet deep) located in the N ½ Section 34-T109N-R47W for rural water system use. Lincoln Pipestone Rural Water serves users in Lincoln, Lyon, Murray and Pipestone Counties in Minnesota.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7392-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest.

Future Use Application No. 7393-3 proposes to appropriate and reserve 614 acre-feet of water annually from the Big Sioux:Aurora Aquifer. The area to be reserved for future water use is to be located in the N ½ Section 34-T109N-R47W. The water is to be reserved for the purpose of providing future water supplies to the rural water system to serve those users listed above. This application does not authorize construction of works or application of water to beneficial use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Future Use Application No. 7393-3 because 1) there is reasonable probability that there may be development of the water reserved under this permit 2) Lincoln Pipestone Rural Water has demonstrated a reasonable need for the water reserved by this permit, 3) the proposed use will be a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 12, 2012.

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

DEC 19 2012

Lincoln Pipestone Rural Water
Dennis Healy, CEO
E Hwy 14, Box 18
Lake Benton MN 56149

Dear Mr. Healy:

Enclosed are Water Permit No. 7392-3 and Future Use Water Permit No. 7393-3.

Water Permit No. 7392-3 authorizes construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit. Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

When plans for facilities are prepared to put any portion of the water granted in Future Use Permit No. 7393-3 to beneficial use, an application covering such facilities and water use should be submitted to this office before construction is initiated.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7392-3

I have this day, May 11, 2021, made a thorough examination of the water use system constructed by Lincoln Pipestone Rural Water, PO Box 188, Lake Benton, MN 56149 of Permit No. 7392-3, bearing the priority of August 8, 2012 authorizing the diversion of 2.67 cu. ft. per second of the waters of the Big Sioux: Aurora Aquifer for rural water use purposes, in Brookings County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Steffl Drilling & Pump, Inc
- 2) No. of Wells 2 West & East
- 3) Depth(s) 68 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 18 inches
- 2) Length 49 feet
- 3) Type Steel

Screen:

- 1) Type Stainless steel
- 2) Length 20 feet
- 3) Static water level 16 & 18 feet

Pump:

- 1) Make NA
- 2) Model NA
- 3) Size NA
- 4) Capacity 600 (West) & 450 (East) GPM

Motor:

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

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: From the NW corner of Sec 34 T109N-R47W: WELL – (WEST) - #1 940 ft S & 30 ft E, Lat 44.20837 Long -96.46537 (NW ¼ NW ¼ Sec 34) WELL – (EAST) - #2 1760 ft S & 2400 ft E, Lat 44.20627 Long -96.45635 (SE ¼ NW ¼ Sec 34)
2. The works are capable of diverting and conveying to the place of use 2.34 cu. ft. per second of water which is to be used for rural use.
3. All structures, wells and lands on map Y

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

Mr Jason Overby, Rural Water System Manager, provided this reviewer with the following operational discharges for Well #1 (West) of 600 gpm and Well #2 (East) of 450 gpm. There has been a turnover of personnel at the organization which made for a reporting delay.

The address and phone number provided in the review materials are current.

FSA maps and the ArcMAPS software were used in the preparation of this report.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: June 22, 2021



0 0.15 0.3 0.6 0.9 1.2 Miles



Darrell DeBoer
 Water Right Inspector
 DANR-Water Rights Program

SD-2 - EAST

7392-3

SD EForm - 1621LD V1

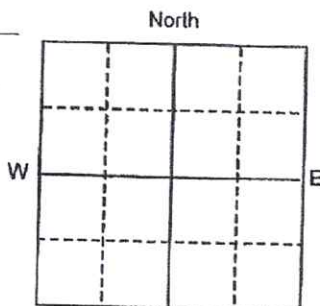
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW ¼ NW ¼ Sec 34 Twp 109 Rg 47

County Brookings

Please mark well location with an "X"



Well Completion Date

August 29, 2013

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	18.00 IN	2.0 FT	49.0 FT	24.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Neat Cement	56	15.5 Lb/gal	0.0 Ft	48.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Pressure Tremmie

SCREEN:

☐ Perforated pipe ☒ Manufactured

Diameter 18.00 Inches Length 20.0 Feet

Material Stainless Steel

Slot Size Set From 43.0 Feet to 68.0 Feet

Other information 5' 10 slot, 15' 80 slot, 5' SS sch 80 tail

WAS A PACKER OR SEAL USED?

☒ Yes ☐ No

If so, what material? SS, Rubber

Describe packer(s) and location
43'

DISINFECTION:

Was well disinfected upon completion?

☒ Yes, How? ChlorineLab to which water quality sample sent for analysis ☐ No, Why Not?

Well Owner: Lincoln-Pipestone Rural Water

Business Name:

Address: East Hwy 14, Box 188

City, State, Zip: Lake Benton MN 56149

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil Blk	0	2
Clay Ylw	2	8
Sand Brn/Red	8	48
Sand Brn/Red	48	63
Clay Blu	63	68

STATIC WATER LEVEL 18.7 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: Submersible☐ Bailed☐ Other

Pumping Level Below Land Surface

44.9 Ft. After 6.0 Hrs. pumped 450.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Production Well H

44 12 29.8 N

96 27 54.8 W

Elev 1729

This well was drilled under license # 463 and this report is true and accurate.

Drilling firm: Steffl Drilling & Pump Inc / Kris VanHueveln

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

SD-1 - West

7392-3

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

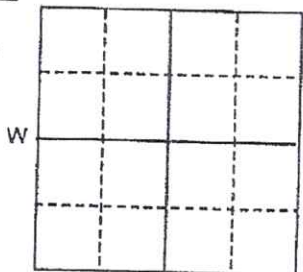
11-02

Location NW ¼ NW ¼ Sec 34 Twp 109 Rg 47

County Brookings

North

Please mark well location with an "X"



Well Completion Date

August 8, 2013

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.):
ft. from (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

If other describe ☒ Steel ☐ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
70.65 LB/FT	18.00 IN	2.0 FT	49.0 FT	24.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Neat Cement		Lb/gal	Ft	Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Pressure Tremmie

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 18.00 ts Inches Length 20.0 Feet

Material Stainless Steel

Slot Size Sel From 43.0 Feet to 68.0 Feet

Other information 5' 10 slot, 15' 80 slot, 5' SS sch 80 tail

WAS A PACKER OR SEAL USED?

☒ Yes ☐ No

If so, what material? SS, Rubber

Describe packer(s) and location
43'

DISINFECTION:

Was well disinfected upon completion?

☒ Yes. How? Chlorine☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: Lincoln-Pipestone Rural Water

Business Name:

Address: East Hwy 14, Box 188

City, State, Zip: Lake Benton MN 56149

WELL LOG:

	FORMATION	DEPTH	
		FROM	TO
Top Soil	Blk	0	2
Clay	Ylw	2	8
Sand		8	63
Clay	Blu	63	72

STATIC WATER LEVEL 16.06 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: Submersible☐ Bailed☐ Other

Pumping Level Below Land Surface

36.02 Ft. After 8.0 Hrs. pumped 600.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Production Well D

44 12 29.8 N

96 27 54.8 W

Elev 1729

This well was drilled under license # 463 and this report is true and accurate.

Drilling firm: Steffl Drilling & Pump Inc / Kris VanHueveln

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:



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

JUL 02 2021

7392-3

Jason Overby
Lincoln Pipestone Rural Water
PO Box 188
Lake Benton MN 56149-0188

Dear Mr. Overby:

Enclosed is Water License No. 7392-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7392-3

(1) Lincoln Pipestone Rural Water, PO Box 188, Lake Benton SD 56149 made Application No. 7392-3, August 8, 2012 for a water permit to divert 2.67 cubic feet of water per second (614 acre-feet annually) from ground water, two wells, Big Sioux Aurora Aquifer, Brookings County, South Dakota for rural water system purposes. Permit No. 7392-3, with a priority date of August 8, 2012 was approved November 12, 2012 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before November 12, 2017 and for the application to beneficial use of water on or before November 12, 2021.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to divert 2.34 cubic feet of water per second for beneficial use. The diversion points are located as follows:

West Well: 940'S and 30'E from the NW corner of Section 34, T109N, R47W (NW ¼ NW ¼)
Latitude 44.20837, Longitude -96.46537

East Well: 1,760'S and 2,400'E of the NW corner of Section 34, T109N, R47W (SE ¼ NW ¼)
Latitude 44.20627, Longitude -96.45635

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use serving users in Lincoln, Lyon Murray and Pipestone Counties in Minnesota.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Lincoln Pipestone Rural Water, PO Box 188, Lake Benton, MN 56159 the holder and/or owner of Water Right No. 7392-3 is issued a license to appropriate water, the right to use 2.34 cubic feet of water per second from ground water, two wells (Big Sioux Aurora Aquifer) with a priority date of August 8, 2012 from the location specified in (2) of this license for rural water system purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7392-3 and subject to the following qualifications:

- The wells approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The wells authorized by Permit No. 7392-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. ***The two wells were drilled in August, 2013 by Steffl Drilling & Pump Inc. Copies of the well completion reports are on file with the Water Rights Program.***

continued

- Water Right No. 7392-3 authorizes a total annual diversion of 614 acre feet of water annually.
- Lincoln Pipestone Rural Water shall report to the Chief Engineer annually the amount of water withdrawn from the Aurora Management Unit of the Big Sioux Aquifer.

Eric Gronlund

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

JUL 02 2021

date

