

WATER PERMIT NO. 8254-3

Name of Applicant: David Zubke

Address: 44769 149th St, Waubay SD 57273 Phone: 605 265-0069

Amount of Water Claimed: 4.44 cfs Total Acres: 420

Source of Water Supply: groundwater (4 wells)

Water to be used for: irrigation County: Day

Type of Waste Disposal System:

Location: 8 miles south of Waubay

PRIORITY Date Received: 12-16-16 Application/License Fee: \$1450

Corrected Application Received: Period of Annual Use: April 1-Oct 31

Remarks:

Diversion Point: ^{S 1/2} SE 1/4 SW 1/4, SW 1/4 SE 1/4 Sec
23-T121N-R53W

Land to be Irrigated: W 1/2 NW 1/4, W 1/2 SW
1/4 Sec 25 and E 1/2 Sec 26; all in T121N-R53W

Depth of Well: 47 feet deep

Well Driller: Wieber Well Drilling

Remarks:

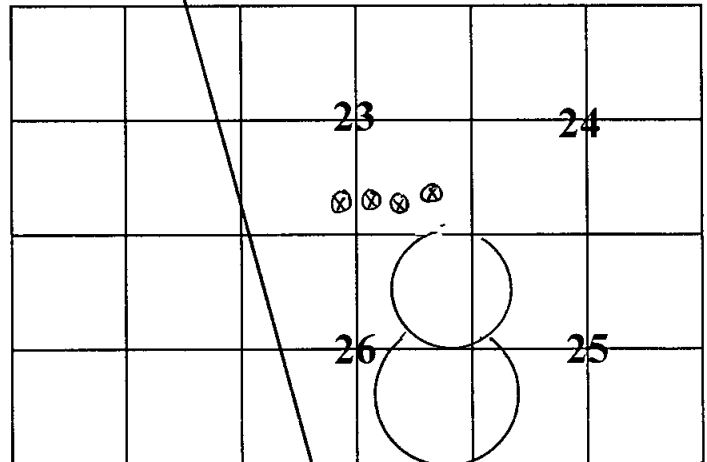
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 12-19-16

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



FORM 2: Application for irrigation in South Dakota
(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8254-3</u> (office use only)	Hydrologic Unit <u>10170202</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>Waukey Clipper</u> <u>605-947-4501</u>	
	<u>Public Opinion - Watrous</u> <u>605-886-6901</u>	

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DEC 16 2016
WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

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

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

1. Name to Appear on Irrigation Permit David Zubke

Note: The "Name to Appear on Irrigation Permit" must be the name in which the property to be irrigated is held in.

Mailing Address 44769 149th St Waubay SD 57273
(Address) (City) (State) (Zip Code)

Phone 947-4114 Mobile 265-0069 Email _____

2. Amount of water claimed 4.46 *CFS or 2000 **GPM ***AF Total Acreage 420
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply 4 wells

4. Location of point of diversion

(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

4 wells in S 1/2 SE 1/4 sec 23 T12N R53W County Day

5. County or counties where water will be used Day

6. Annual period during which water is to be used April - October 31

7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
<u>See Attached</u>			

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

4 wells pumped through PVC Pipe to 2 center pivots
with corner arms
The wells are going to be located on sec 23 and pumped to
sec 26 to the 2 center pivots. The pivots will also water on sec 25

I, David Zubke, the applicant, certify under
Name of Person Title (if applicable)

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

SOUTH DAKOTA
WATER PERMIT NO. 8254-3

Date of first receipt of application December 16, 2016.

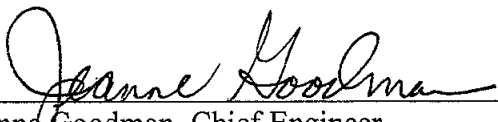
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8254-3 to David Zubke, 44769 149th St, Waubay SD 57273 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 8254-3 appropriates 4.46 cubic feet of water per second from four wells to be completed into the Prairie Coteau Aquifer (47 feet deep) located in the S 1/2 SE 1/4 Section 23 for irrigation of 420 acres located in the W 1/2 NW 1/4, W 1/2 SW 1/4 Section 25 and E 1/2 Section 26; all in T121N-R53W within the former boundaries of the Sisseton Wahpeton Indian Reservation.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.
3. The date from which applicant may claim right is December 16, 2016.
4. The date of approval of Permit No. 8254-3 is March 8, 2017.
5. One-fifth of the construction is to be completed on or before September 8, 2019.
6. All construction is to be completed on or before March 8, 2022.
7. Water is to be put to beneficial use on or before March 8, 2026.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

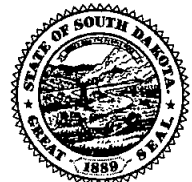
QUALIFICATIONS

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 8254-3 shall be constructed by a licensed well driller and construction of the wells and installation of the pumps shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casings pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

APR 26 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 4 Have test holes been drilled ☒ Yes ☐ No Drilled by Wieber Well Drilling
(if yes, please provide copies of logs)b) If existing wells, how many Provide copy of log(s), if available. Drilled by

For either Existing or Proposed Wells:

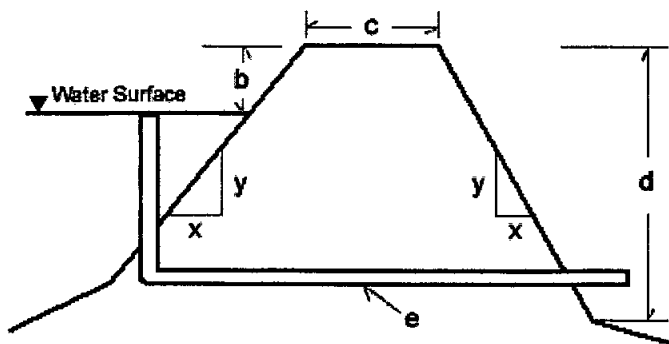
c) Well Depth (required) 47' Depth to Top of Water Bearing Material 30' Depth to Water from Surface 4'd) Distance to nearest domestic well on applicant's property ? 1000 Ft Est Property owned by others 4000 Ft Est**2. Wastewater Disposal System Information**a) Type of System (i.e. septic tank, drain 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 Feetj) Drainage Area Above Dam Acres

DAVID ZUBKE

LOCATION	SECTION	TWP	RANGE	ACRES
NW 1/4, NW 1/4	25	121N	53W	29
SW 1/4, NW 1/4	25	121N	53W	28
NW 1/4, SW 1/4	25	121N	53W	40
SW 1/4, SW 1/4	25	121N	53W	38
SE 1/4, SE 1/4	26	121N	53W	40
NE 1/4, SE 1/4	26	121N	53W	40
SW 1/4, SE 1/4	26	121N	53W	34
NW 1/4, SE 1/4	26	121N	53W	38
SW 1/4, NE 1/4	26	121N	53W	24
NW 1/4, NE 1/4	26	121N	53W	29
NE 1/4, NE 1/4	26	121N	53W	40
SE 1/4, NE 1/4	26	121N	53W	40

152

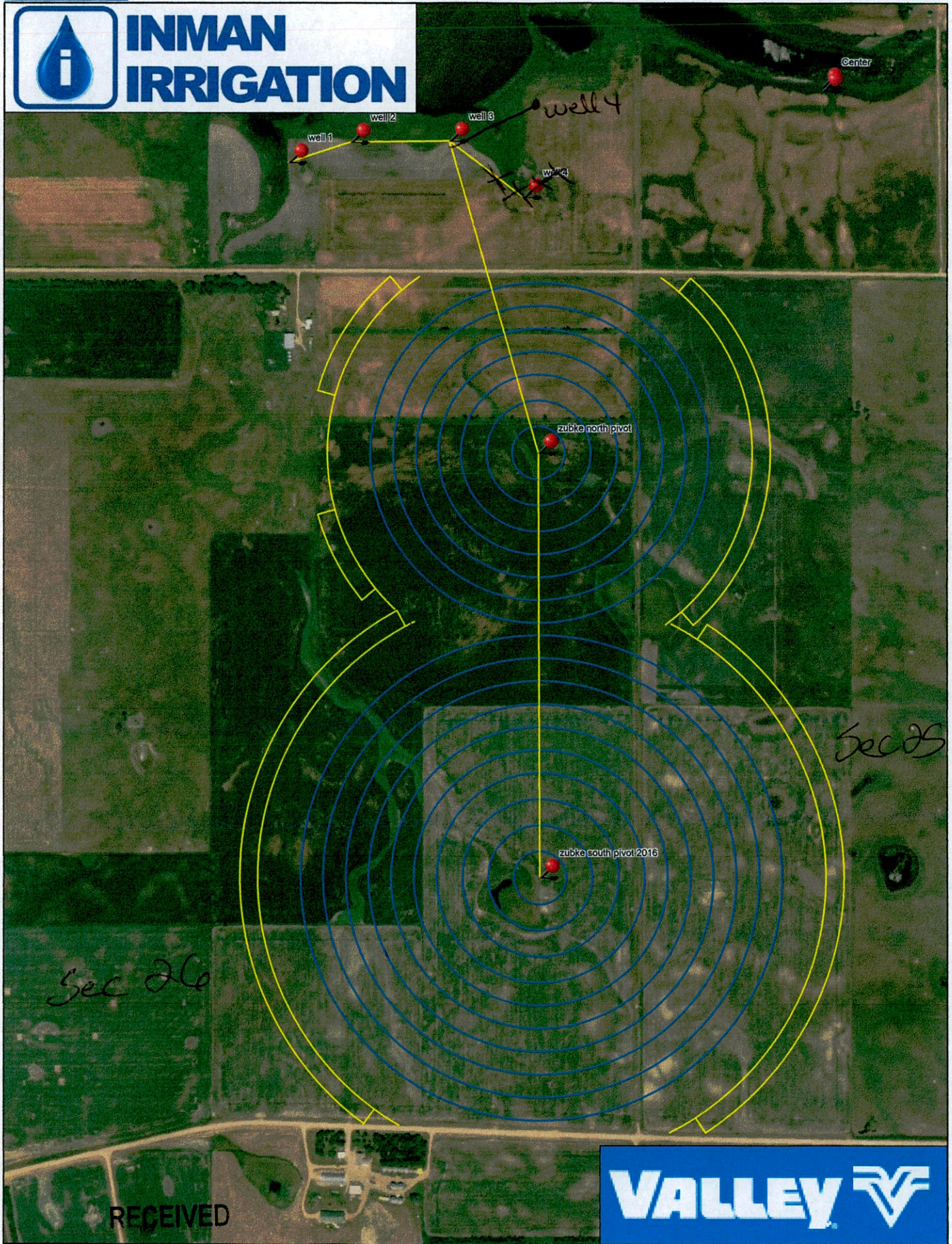
133

Total: **420**

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**INMAN
IRRIGATION**



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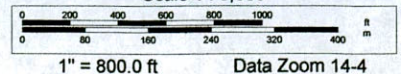
Data use subject to license.
© DeLorme, XMap® 7.

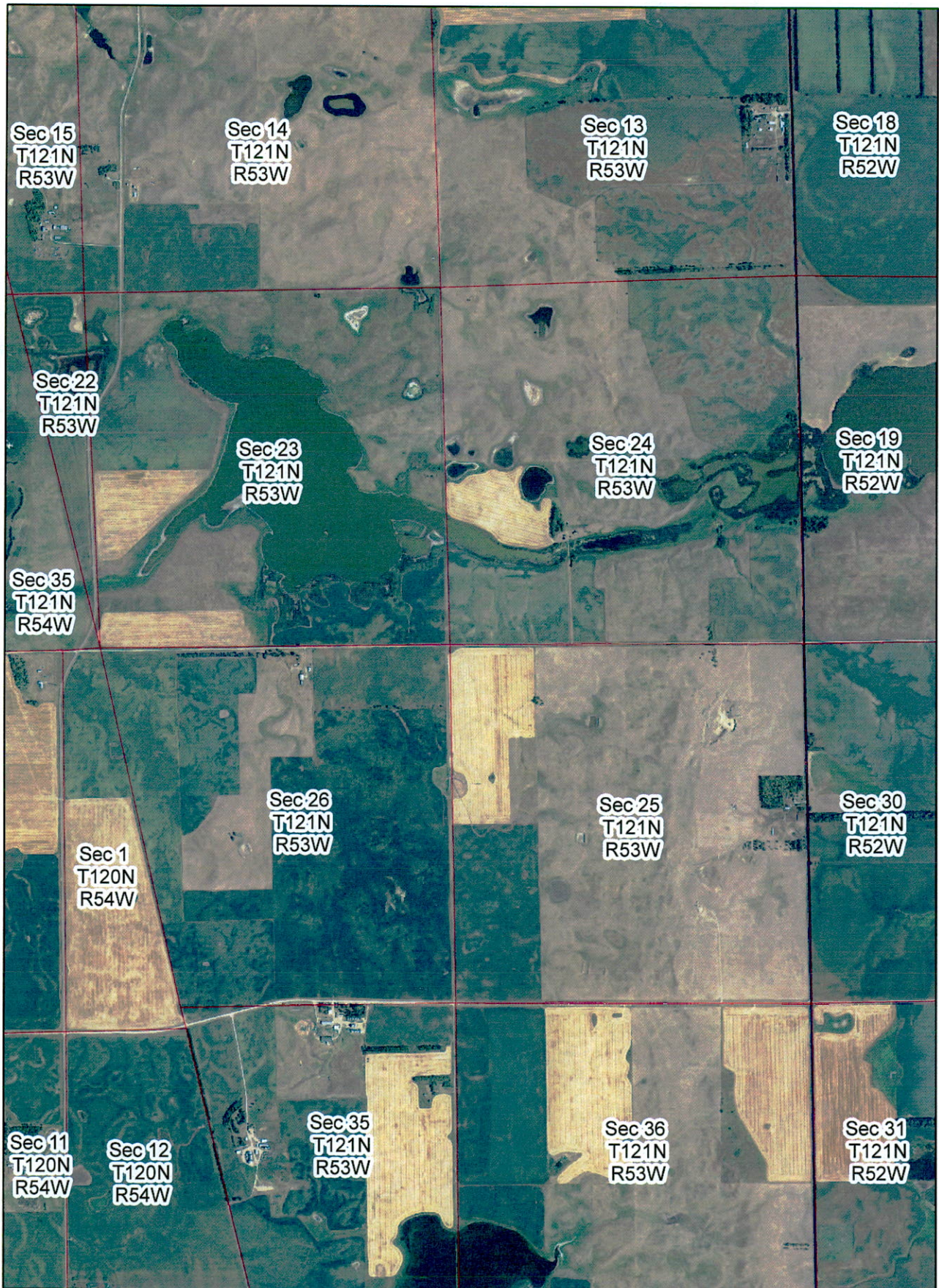
www.delorme.com WATER RIGHTS PROGRAM

TN
MN (3.1°E)

T12N R53W

Scale 1 : 9,600





test well

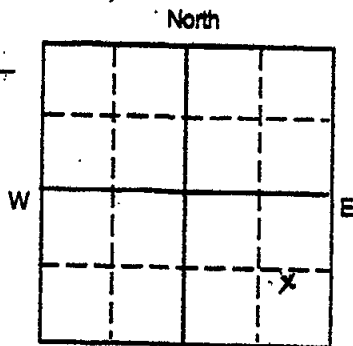
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 SE 1/4 Sec 23 Twp 121 Rg 53

County PAY

Please mark well location with an "X"



Well completion Date

11/8/16

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

? 1/2 ft. from 1N Field (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

FOURD

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
200 LB/FT	12 IN	0 FT	32 FT	18 1/2 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type W & Ben No. of Sacks 7 Grout Weight 10 Lb/gal From 0 Ft To 22 Ft
 Lb/gal Ft Ft

Describe grouting procedure Full hole grouting
from line to 22

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 12 Inches Length 15 Feet
 Material PVC Ever-Flow
 Slot Size .100 Set From 32 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?
☒ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner:

David Zubkey

Business Name:

Address1:

44769 149th St

Address2:

Waubesa, SD

City, State, Zip:

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
top soil	0	2
sandy	2	12
clay strip	12	32
coarse sand	32	47

STATIC WATER LEVEL

4'

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:

AIR

☐ Bailed

☒ Other

Test Pump

Pumping Level Below Land Surface

24

Ft. After 48

Hrs. pumped

600

GPM

Ft. After

Hrs. pumped

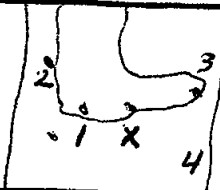
GPM

If pump installed, pump rate:

GPM

REMARKS

12" test well



This well was drilled under license #

480

And this report is true and accurate.

Drilling firm:

Wieber Well Drilling

Signature of License Representative:

Jerry Wieber

Signature of Well Owner or Equitable Property Holder:

RECEIVED

Date:

523 E. Capitol Ave., Pierre SD 57501

DEC 16 2016

WATER RIGHTS PROGRAM

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Test hole 1

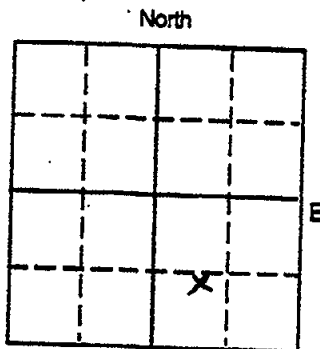
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 SW 1/4 Sec 23 Twp 121 Rg 53

County Day

Please mark well location with an "X"



Well completion Date

11/4/16

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

? 1/4 ft. from 1/4 Field (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Forward Rotary

CASING DATA:

- ☐ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type Ag-ben No. of Sacks 2 Grout Weight 10 Lb/gal From 0 Ft To 47 Ft

Describe grouting procedure Full hole grouting

SCREEN:

- ☐ Perforated pipe ☐ Manufactured

Diameter _____ Inches 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?
☒ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner:

DAVID Zubkey

Business Name:

Address1: 44769 149th St

Address2:

City, State, Zip: Waubay, SD

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>top soil</u>	<u>0</u>	<u>2</u>
<u>sandy</u>	<u>2</u>	<u>12</u>
<u>sandy clay strips</u>	<u>12</u>	<u>32</u>
<u>coarse sand</u>	<u>32</u>	<u>47</u>

STATIC WATER LEVEL

If flowing: closed in pressure _____ FEET
 _____ 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:
☐ Bailed
☐ Other

Pumping Level Below Land Surface

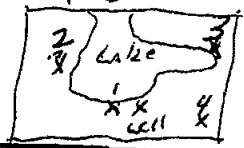
_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

300' NW of 12" test well
test hole 1-084
good



This well was drilled under license #

480

And this report is true and accurate.

Drilling firm: Wieber Well Drilling

Signature of License Representative:

Jerry Wieber

Signature of Well Owner or Equitable Property Holder:

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DEC 16 2016

Date:

523 E. Capitol Ave., Pierre SD 57501

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lost hole

SOUTH DAKOTA WATER WELL COMPLETION REPORT

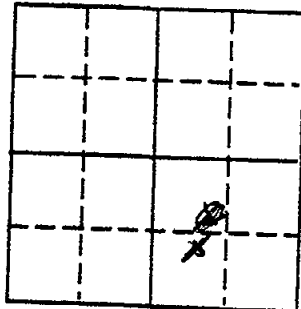
11-02

Location S 1/4 SE 1/4 Sec 23 Twp 121 Rg 53

County

Day

North



Please mark well location with an "X"

Well completion Date

1/4/16

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

? 12 ft from in field (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Forward Rotary

CASING DATA:

- ☐ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	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>wp-120</u>	<u>2</u>	<u>10</u> Lb/gal	<u>0</u> Ft	<u>47</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Full hole + cement line to 47

SCREEN:

- ☐ Perforated pipe ☐ Manufactured

Diameter Inches 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?

- ☐ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner:

DAVID Zubkey

Business Name:

Address1:

44769 149th

Address2:

Embury SD 57273

City, State, Zip:

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>top soil</u>	<u>0</u>	<u>2</u>
<u>Sandy</u>	<u>2</u>	<u>11</u>
<u>CLAY</u>	<u>11</u>	<u>32</u>
<u>coarse sand</u>	<u>32</u>	<u>47</u>

STATIC WATER LEVEL

If flowing: closed in pressure

 FEET

GPM flow

 through

PSI

Controlled by

- ☐ Valve ☐ Reducers ☐ Other

Inch pipe

Reduced flow rate

GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:

☐ Bailed

☐ Other

Pumping Level Below Land Surface

 Ft. After Hrs. pumped GPM

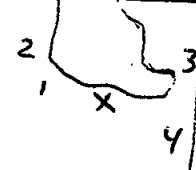
 Ft. After Hrs. pumped GPM

If pump installed, pump rate:

GPM

REMARKS

lost hole 2004



This well was drilled under license #

480

And this report is true and accurate.

Drilling firm:

Wieber Well Drilling

Signature of License Representative:

Jerry Wieber

Signature of Well Owner or Equitable Property Holder:

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Date:

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test #3

SOUTH DAKOTA WATER WELL COMPLETION REPORT

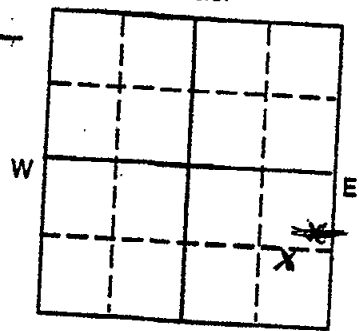
11-02

Location NE 1/4 SW 1/4 Sec 23 Twp 121 Rg 53

County

Day

North



Please mark well location with an "X"

Well completion Date

10/31/16

Distance from nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)
? 100 ft. from Field (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

FORWARD ROTARY

CASING DATA:

- ☐ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type ayo Ben No. of Sacks 2 Grout Weight 10 Lb/gal From 0 Ft To 47 Ft
Describe grouting procedure

SCREEN:

- ☐ Perforated pipe ☐ Manufactured

Diameter Inches 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? ☒ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner:

David Zubkey

Business Name:

Address1:

44769 149th St

Address2:

City, State, Zip:

Waubesa, SD

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>top soil</u>	<u>0</u>	<u>2</u>
<u>clay sand slips</u>	<u>2</u>	<u>13</u>
<u>clay sandy</u>	<u>13</u>	<u>31</u>
<u>coarse sand good</u>	<u>31</u>	<u>47</u>

STATIC WATER LEVEL

If flowing: closed in pressure FEET
GPM flow through PSI
Controlled by ☐ Valve ☐ Reducers ☐ Other Inch pipe
Reduced flow rate 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

test hole 3 of 4
good

This well was drilled under license #

480

And this report is true and accurate.

Drilling firm:

Wieber Well Drilling

Signature of License Representative:

Jerry Wieber

Signature of Well Owner or Equitable Property Holder:

RECEIVED

Date:

DEC 16 2016

523 E. Capitol Ave., Pierre SD 57501

WATER RIGHTS

Please return White Copy to DENR Water Rights

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 12/16, 20 18

RECEIVED OF David Zubke 44769 149th St Waubay SD 57273

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

Fee for Application for Permit No. <u>8254-3</u> to Appropriate Water, to construct and to put water to beneficial use	1250	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>8254-3</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	1450 00

No. **07954**

By J. Ann Handman
Chief Engineer

Gronlund, Eric

From: Gronlund, Eric
Sent: Thursday, March 02, 2017 3:24 PM
To: dzubke@itctel.com
Subject: water permit application

Mr. Zubke:

This is a follow up to our phone conversation. DENR received a call regarding the public notice for your water permit application. The caller did not express opposition to the application. The two issues that the caller brought up were:

1. The gentleman stated that there is a township break between Section 23 and Section 26 due to the reservation boundary. Currently the township designation in the public notice is T121N, R53W. I reviewed the 2012 FSA aerial photo and the section, township overlay. Certainly the reservation boundary effects township designation in the west half of Section 26. However, the township designation of T121N, R53W appears to be the same for Section 23, Section 25 and the E ½ Section 26 where the wells and irrigated acres are to be located.
2. Also brought to DENR's attention was that there is a section right of way between Section 25 and 26 where the center pivots will pass. It is my understanding that you will have to go through a process either at the township or county level to have that right of way abandoned. Please know that the granting of the water permit does not grant authority for the pivot to pass through or apply water to a township road or section right of way without getting the proper local authorization. You indicated you were aware of that requirement and plan to get proper authorization.

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

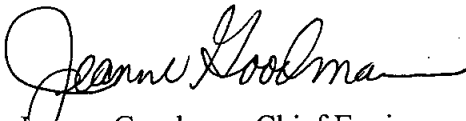
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8254-3, David Zubke**

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. 8254-3, David Zubke, 44769 149th Street, Waubay SD 57273.

The Chief Engineer is recommending APPROVAL of Application No. 8254-3 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. 8254-3 shall be constructed by a licensed well driller and construction of the wells and installation of the pumps shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casings pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.


Jeanne Goodman, Chief Engineer
February 15, 2017

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8254-3
DAVID ZUBKE
FEBRUARY 15, 2017

Water Permit Application No. 8254-3 proposes to appropriate water for the irrigation of up to 420 acres located in the W ½ NW ¼, W ½ SW ¼ Section 25 and E ½ Section 26 at a maximum diversion rate of 4.46 cubic feet of water per second (cfs) from up to four wells to be completed into the Prairie Coteau aquifer located in the SE ¼ SW ¼ and the S ½ SE ¼ Section 23; all in T121N-R53W within the former boundaries of the Sisseton Wahpeton Indian Reservation in Day County.

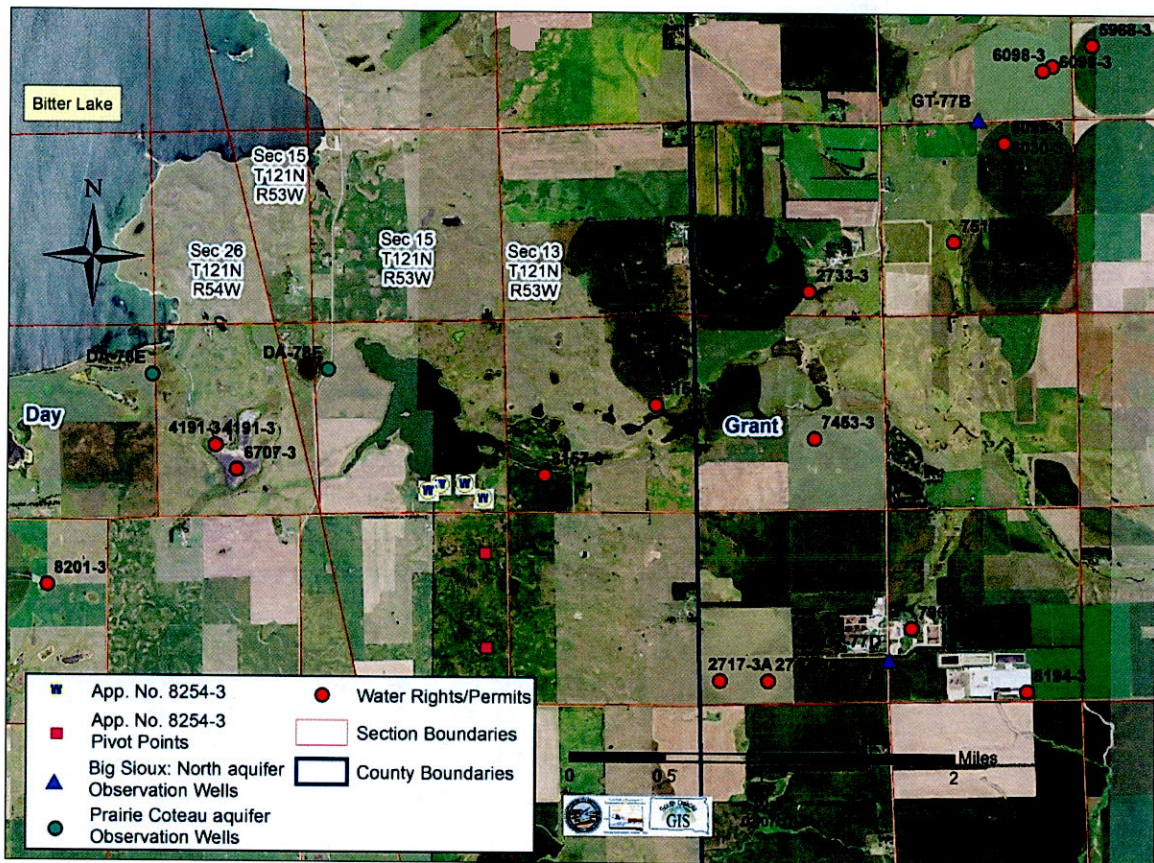
AQUIFER: Prairie Coteau (PCO)

Aquifer Characteristics:

The applicant proposes to withdraw water from aquifer materials at an elevation range of approximately 1,750 to 1,780 feet above mean sea level (fmsl). At this depth and within a couple of miles of this location, aquifer materials have been mapped by Leap (1988; 1972). Leap called the aquifer the Eastern Lakes Subsystem (1988) and the Eastern Lakes aquifer (1972) in his two reports on Day County. However, the DENR-Water Rights Program recognizes the deeper and buried portions of Leap's aquifers as the Prairie Coteau aquifer, and that is the name used in the remainder of this report. The test well log and three test hole logs submitted with this application indicated coarse sand from 32 to 47 feet below grade and the test well had a static water level of four feet below ground surface in November 2016. The aquifer is under confined conditions at the test well site. Figure 1 is a map of the area around the proposed well sites including existing water rights/permits and observation wells. Table 1 is a list of the water rights/permits shown in Figure 1.

Permit No.	Name	County	Status	Aquifer	Use	CFS	Acres
2717-3A	Kristopher Bronson	GT	LC	BS:N	IRR	1.66	231
2733-3	Cheryl Berger	GT	LC	PCO	IRR	2.8	196
4191-3*	Prairie Coteau Restoration LLC	DA	LC	PCO	DOM/FWP	1.11	
5968-3	Don Endres	GT	LC	BS:N	IRR	2.11	132
6030-3	Endres Family Trust	GT	LC	BS:N	IRR	2.12	132
6098-3	Cheryl Berger	GT	LC	BS:N	IRR	2	110
6099-3	Endres Family Trust	GT	LC	BS:N	IRR	2.11	132
6707-3*	Prairie Coteau Restoration	DA	PE	PCO	FWP/DOM	0	
7453-3	Berger Farms	GT	PE	BS:N	IRR	2	140
7516-3	David Zubke	GT	PE	BS:N	IRR	2.22	170
7969-3	Bronson Custom Farms Inc	GT	PE	BS:N	COM/LCO	0.67	
8157-3	David C Zubke	DA	PE	BS:N	IRR	1.55	60
8158-3	David C Zubke	DA	PE	BS:N	IRR	2.22	355
8194-3	Lakeside Dairy	GT	PE	PCO	COM/LCO	0.446	
8201-3*	Kerry Holscher	DA	PE	PCO	IRR	2.22	240
*= In the same portion of the Prairie Coteau as App. No. 8254-3, GT= Grant, DA= Day, LC= Water Right, PE= Water Permit, BS:N= Big Sioux: North, PCO= Prairie Coteau IRR= Irrigation, DOM= Domestic, FWP= Fish and Wildlife Propagation, COM= Commercial, LCO= Livestock Confinement Operation							

Table 1- Water rights/permits shown in Figure 1 (Water Rights, 2017b)



The Prairie Coteau aquifer is a general name for disconnected deposits of generally buried outwash on the Coteau Des Prairies. Hedges and others (1982) estimated the Prairie Coteau aquifer underlies approximately 500,000 acres and contains approximately 675,000 or greater acre-feet (ac-ft) of recoverable water in storage. However, the aquifer is not contiguous. Leap created aquifer and geological maps of Day County, including maps of vertical variability of the outwash deposits (1988). Leap's (1988; 1972) reports show various deposits of aquifer materials between 1,700 and 1,800 fmsl throughout Day County including two deposits within a couple of miles of the proposed well sites. Since completion of Leap's reports, several DENR-Geological Survey lithologic borings (SDGS, 2017), appropriative use wells (Water Rights, 2017b), and domestic wells/test holes (Water Rights, 2017c) have been completed into or through this portion of the Prairie Coteau aquifer and the surrounding area. This portion of the Prairie Coteau aquifer may be in hydraulic connection with the Coteau Lakes aquifer underlying Bitter and Blue Dog Lakes as well as the North management unit of the Big Sioux aquifer (Jensen, 2004; SDGS, 2017; Water Rights, 2017a, 2017b, and 2017c).

The deposition of aquifer materials in Day County is very complex. There were three periods of ice advance during the Pleistocene Epoch (Leap, 1988). Each of these advances deposited, moved, and redeposited glacial outwash in discontinuous deposits throughout the county during the various advances and retreats. The advance of the glaciers also created end moraines at the

absolute limit of ice advance (Leap, 1988). During subsequent ice advances, previously deposited glacial till and outwash can be thrust up as ice advances creating an end moraine.

The Waubay Moraine (see Figure 2) is near the proposed well sites. Leap (1988) notes the moraine as “Terminal Moraine of the James Lobe” in Plate 2 of his report but in the text calls it the Waubay Moraine. Based on DENR-Geological Survey lithologic logs (SDGS, 2017), observation well completion reports (Water Rights, 2017a), water right/permits appropriate well completion reports (Water Rights, 2017b), and water well and test hole completion reports (Water Rights, 2017c), the glacial drift in the area of the proposed well sites was likely thrust upward by the advancing ice which created the Waubay Moraine. The west edge of the moraine shown in Figure 2 is denoted by a line with triangles pointing toward the crest of the moraine.

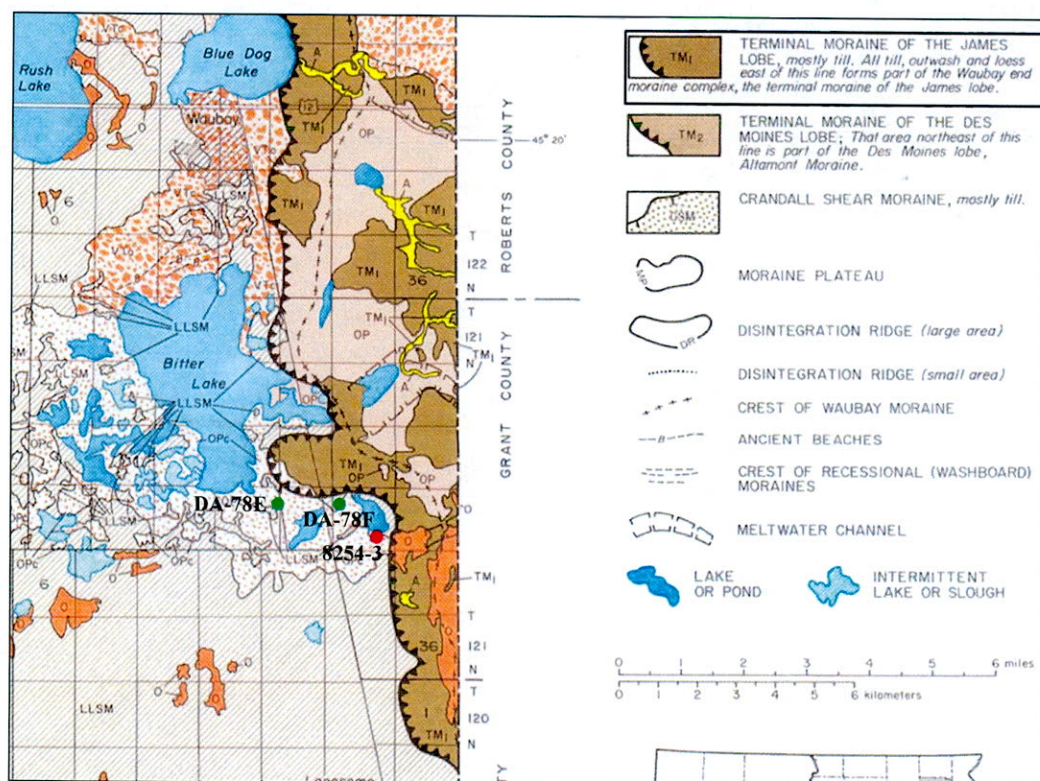


Figure 2- Section of Leap's (1988) geomorphology map of Day County including the Waubay Moraine and modified to show the proposed well sites and nearby Prairie Coteau aquifer observation wells DA-78E and DA-78F

Figure 3 is a cross-section of area borings with a map of the locations of the wells and lithologic borings shown in Figure 4 (SDGS, 2017; Water Rights, 2017a and 2017b). Figure 3 shows as the moraine is approached from the left (west) the ground surface and the Prairie Coteau aquifer, the bottom sand and/or gravel units shown for the well for Water Permit No. 8201-3, DA-78E, DA-78F, and the test well for this application, are likely connected.

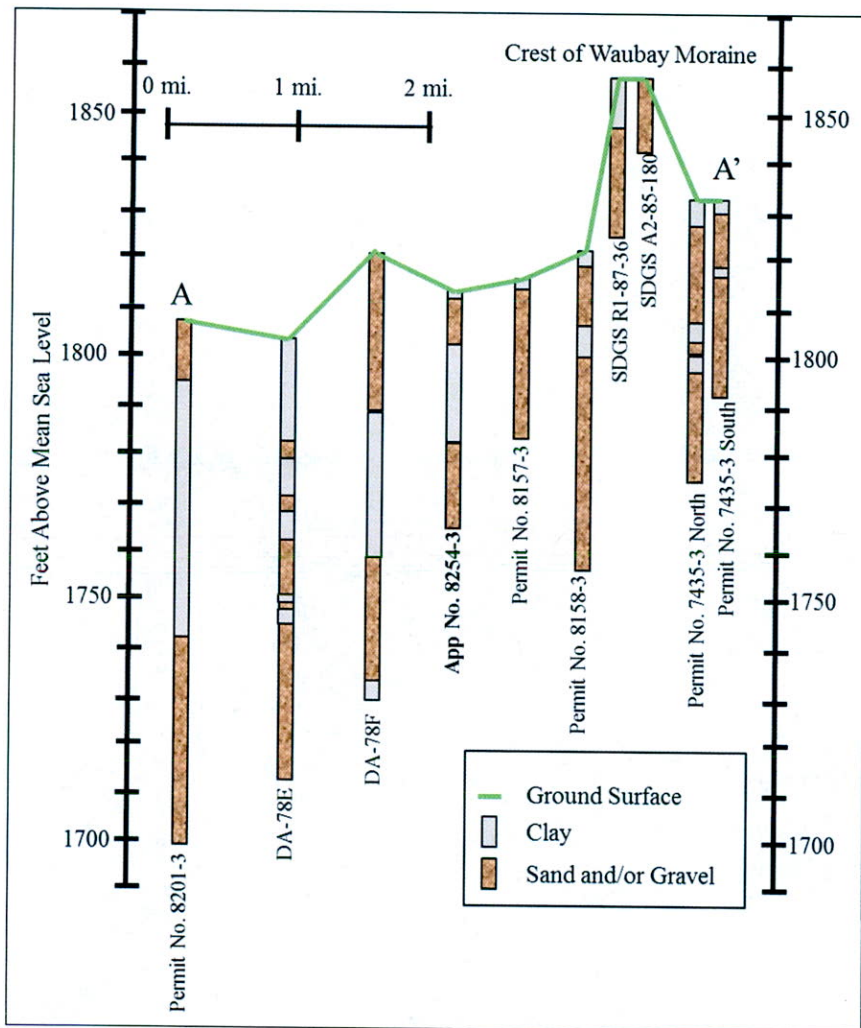


Figure 3- Geologic Cross Section showing the Waubay Moraine

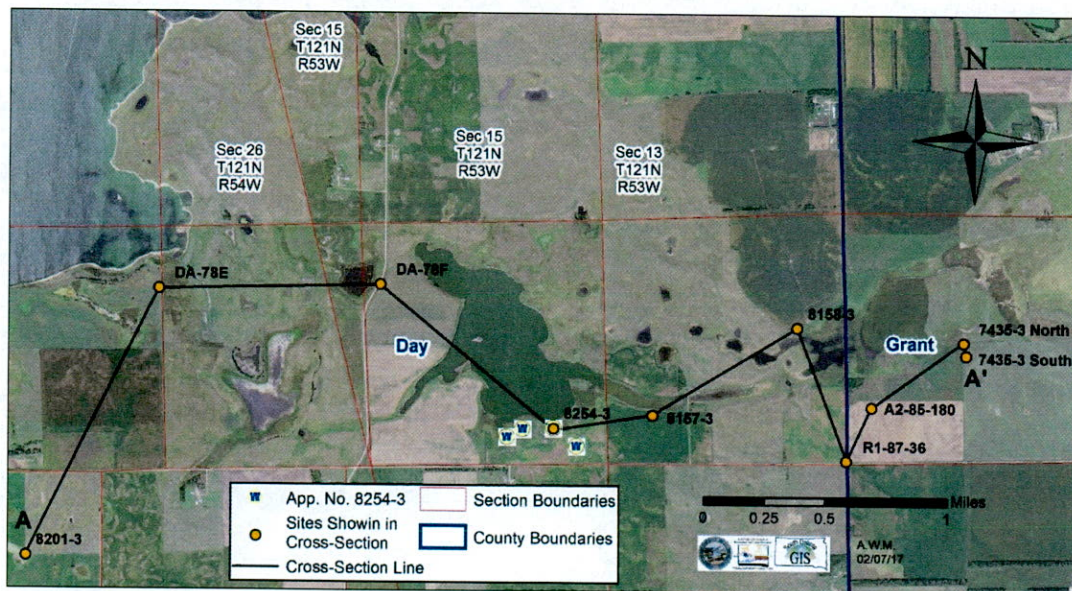


Figure 4- Map showing location of cross-section sites shown in Figure 3

An approximate minimum areal extent of this portion of Prairie Coteau aquifer was previously mapped by Mathiowetz (2016). At that time, Mathiowetz (2016) estimated the minimum extent of this portion of the Prairie Coteau aquifer to be approximately 5,000 acres. The addition of more geologic data in the form of test hole and well completion reports (Water Rights, 2017c) for the area since the completion of Mathiowetz's (2016) report has allowed the estimate to be increased to at least 5,600 acres. The approximate minimum areal extent along with Leap's mapping of the Eastern Lakes System Aquifer (1972), and aquifer materials in the elevation range of 1700 to 1800 feet above mean sea level (1988) are shown in Figure 5. It should be noted the two southern portions of Leap's (1988) aquifer materials were each determined based on only one well.

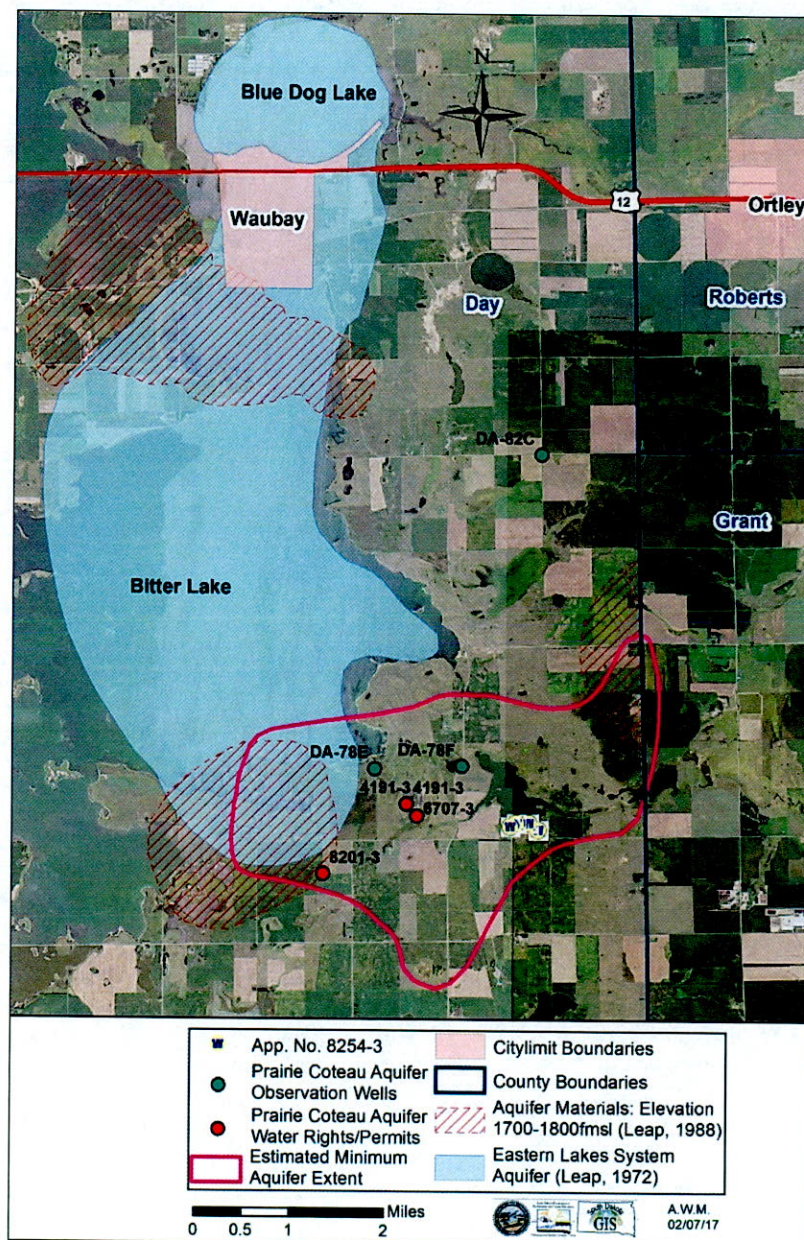


Figure 5- Approximate minimum areal extent of the portion of the Prairie Coteau aquifer Application No. 8254-3 proposes to use

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

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for this 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 effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate water from the Prairie Coteau 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." 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. In this case, the aquifer is not stratigraphically lower than the Greenhorn Formation and the applicant is not a water distribution system.

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 in addition to other data 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 57 observation wells completed into the Prairie Coteau aquifer with two observation wells, DA-78E and DA-78F, completed into the portion of the aquifer this application proposes to use (Water Rights, 2017a). The hydrographs for these observation wells are shown in Figures 6 and 7, respectively (Water Rights, 2017a). The hydrographs show over the period of record the water levels have risen approximately 10 to 15 feet.

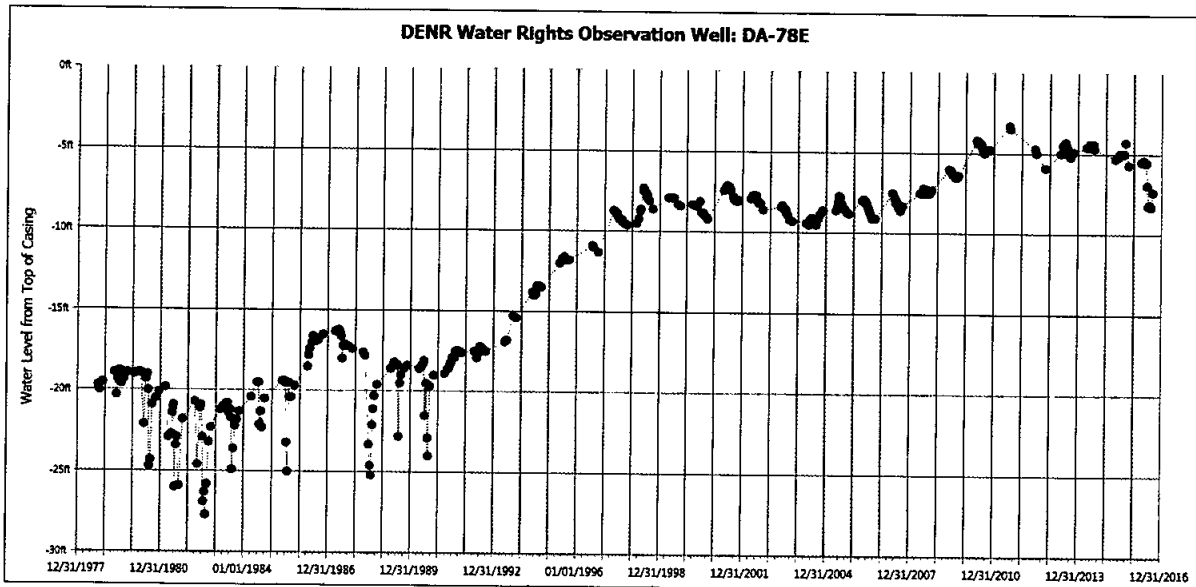


Figure 6- Hydrograph for DA-78E, approximately 1.5 miles northwest of proposed well sites (Water Rights, 2017a)

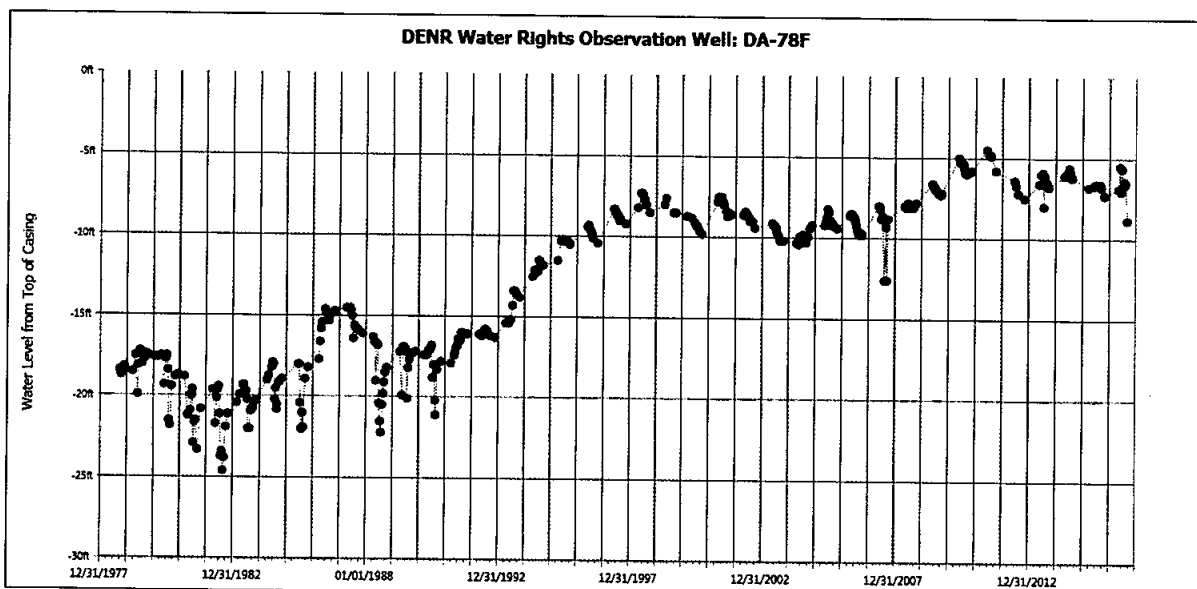


Figure 7- Hydrograph for DA-78F, approximately 1.5 miles northwest of proposed well sites (Water Rights, 2017a)

The water levels in both hydrographs show the effects of pumping on water level pre-1990. However, during that time and since then the effects of climate on the water level have been dominant. When climate dominates water levels, it means recharge to and natural discharge from an aquifer significantly exceeds pumping. Natural discharge from an aquifer can be captured for pumping. Recognizing natural discharge from an aquifer can be captured, the hydrographs document there is unappropriated water available in this portion of the Prairie Coteau aquifer.

Recharge and Discharge:

This portion of the Prairie Coteau aquifer discharges through well withdrawals and outflow to hydraulically connected outwash deposits that may include other portions of the Prairie Coteau aquifer, the Coteau Lakes aquifer that underlies and surrounds Bitter Lake, and the Big Sioux: North aquifer that is immediately east of the proposed well sites. Water Right No. 4191-3 and Water Permit Nos. 6707-3 and 8201-3 are authorized to withdraw water from the same portion of the Prairie Coteau aquifer as this application (Water Rights, 2017b). The three water rights/permits are listed in Table 2. There are also several domestic wells on file that are completed into the portion of the Prairie Coteau aquifer this application proposes to use (Water Rights, 2017c).

Permit No.	Name	Status	Use	CFS	Acres	Storage
4191-3	Prairie Coteau Restoration LLC	LC	DOM/FWP	1.11		100 ac-ft
6707-3	Prairie Coteau Restoration	PE	FWP/DOM	0		99.8 ac-ft
8201-3	Kerry Holscher	PE	IRR	2.22	240	
DA= Day, LC= Water Right, PE= Water Permit, PCO= Prairie Coteau						
IRR= Irrigation, DOM= Domestic, FWP= Fish and Wildlife Propagation						

Table 2- Water rights/permits withdraw water from the same portion of the Prairie Coteau aquifer as Application No. 8254-3 (Water Rights, 2017b)

The contact for Water Right No. 4191-3 and Water Permit No. 6707-3, Kurt Forman, stated since Water Permit No. 6707-3 was approved in 2006 and for several years before then they had not pumped any water into the 100 ac-ft ring dike authorized by Water Right No. 4191-3 or the 99.8 ac-ft wetland authorized by Water Permit No. 6707-3 (Forman, 2017). Mr. Forman (2017) also said that pumping had been limited to a few hundred gallons of water to fill all-terrain vehicle mounted sprayer tanks for weed control purposes. Mr. Forman estimated they would likely only pump enough water to fill the ring dike authorized by Water Right No. 4191-3, if needed. Generally, non-irrigation water use is estimated by assuming pumping at the maximum permitted diversion for 60 percent of the time. Using that method Water Right No. 4191-3 would pump approximately 482 ac-ft/yr. However, based on the conversation with Mr. Forman (2017), it is likely they would not pump more than 100 ac-ft/yr. at maximum and have so far only pumped a few hundred gallons of water per year. Mr. Forman also stated they may wish to supply water to a couple of cattle tanks for approximately 90 head in May and June in the future. The maximum estimated water use for that purpose is 0.3 ac-ft/yr. (Lardy et. al, 2008).

The potential domestic use from this portion of the Prairie Coteau aquifer is likely less than 3.4 ac-ft/yr. This estimate is based on water use values from Carter and Neitzert (2008) for livestock in Day County and a weighted average per capita use for the counties listed in the report, because there is no estimate for Day County. This assumes all of the livestock water use and domestic use within the approximate boundary of this portion of the Prairie Coteau aquifer (see Figure 5) is from the portion of the Prairie Coteau aquifer this application proposes to use. It is more likely that there are multiple aquifers being used in this area and some rural housing units are connected to rural water, which would reduce the domestic water use in this area.

Water Permit No. 8201-3 was approved in May 2016. During the 2016 irrigation season, 170 acres were irrigated with 68.9 ac-ft of water under the authorization of Water Permit No. 8201-3 (Water Rights, 1979-2017). The application rate of irrigation has been calculated for several

other aquifers in South Dakota. They are shown in Table 3. The three aquifers listed in Table 3 range from approximately 50 to 75 miles southwest of the proposed well sites. The application rate for the “Waubay area, within 15 miles of 8238-3” shown in Table 3 was calculated by Buhler (2016). The well sites for Water Permit No. 8238-3 are approximately 6.4 miles north of the well sites proposed by this application. Buhler (2016) calculated the irrigation application rate for every groundwater irrigation water right/permit within approximately 15 miles of a proposed well site for Water Permit No. 8238-3 for the years 2006 through 2015. The average across that time period is 6.61 in/yr.

Aquifer or Area	Application Rate (in/ac)
Tulare: East James ¹	7.68
Floyd: Pearl Creek ²	7.61
Tulare: Western Spink/Hitchcock ³	9.39
Waubay Area, within 15 miles of 8238-3 ⁴	6.61
Average	7.82
¹ = Buhler, 2012; ² = Buhler, 2013; ³ = Buhler, 2014; ⁴ = Buhler, 2016	

Table 3- Calculated irrigation application rates for aquifers in South Dakota

The application rate for Water Permit No. 8200-3 was 4.86 in/yr. That is less than any of the calculated application rates. It would be more appropriate to estimate average annual pumping in a range of 6.61 to 9.39 in/yr. for Water Permit No. 8201-3 and this application, if it is approved. Water Permit No. 8201-3 authorizes the irrigation of 240 acres. That is a range of 132 to 188 ac-ft/yr. Application No. 8254-3 would then be estimated to pump somewhere in the range of 231 to 329 ac-ft/yr.

Melting snow and infiltration of rain and runoff on hydraulically connected surface deposits of outwash likely recharges this portion of the Prairie Coteau aquifer (Leap, 1972). There is no estimated recharge rate for the Prairie Coteau aquifer. Hedges and others (1985) stated for management and development programs a range of 0.15 in/yr. to 0.6 in/yr. would be reasonable recharge rates to buried, confined aquifers. Using Hedges and others (1985) recharge rate estimate and the estimated minimum areal extent of this portion of the Prairie Coteau aquifer (5,600 acres), the annual recharge rate would be 70 to 280 ac-ft/yr. The observation well data does not support the estimated recharge rate range from Hedges and others (1985).

If this application is approved, a total of 660 acres of irrigation will be authorized using water from this portion of the Prairie Coteau aquifer. Using the above mentioned irrigation application rate that is a range of 363 to 517 ac-ft/yr. pumped for irrigation. Adding a domestic use of approximately 3.4 ac-ft/yr. and an estimated use under Water Right No. 4191-3 and Water Permit No. 6707-3 of 0.3 ac-ft/yr., the total estimated average annual pumpage from this portion of the Prairie Coteau aquifer ranges from 366.7 to 520.7 ac-ft/yr. The required range of recharge rates to support the estimated average annual withdrawals from this portion of the Prairie Coteau aquifer is 0.79 to 1.16 in/yr. This range of recharge rates is reasonable because this portion of the Prairie Coteau aquifer is likely hydraulically connected to Bitter Lake and its underlying Coteau Lakes aquifer.

EXISTING WATER RIGHTS:

The wells authorized by Water Right No. 4191-3 and Water Permit No. 8201-3 are approximately 1.1 and 2.0 miles west of the westernmost well site proposed by this application (see Figures 1 and 3) (Water Rights, 2017b). There are also a number of domestic wells completed into the same portion of the Prairie Coteau aquifer this application proposes to use within approximately 1.5 miles of the proposed well sites (Water Rights, 2017c).

The hydrographs for observation wells DA-78E and DA-78F, shown in Figures 6 and 7 respectively, are representative of this portion of the Prairie Coteau aquifer. Both hydrographs show the effects of pumping on water levels prior to cessation of irrigation pumping by Incorporated License No. 3834-3 and Water Right No. 4191-3 after 1989. In November 1994, Permit No. 3834-3 was incorporated into Water Right No. 4191-3. The authorization for irrigation was removed from Water Right No. 4191-3 in May 2006 after the permit holder indicated irrigation use had been discontinued. At the end of 1989, the water rights/permits authorized to withdraw water from this portion of the Prairie Coteau aquifer were authorized for the irrigation of 472 acres and pumped at a much greater diversion rate (3.6 cfs) than now. In the case of both observation wells, there was at least 36 feet of artesian head pressure below the lowest recorded water levels. Since the lowest recorded water levels, both observation wells have seen a rise in water levels ranging from approximately 10 to 15 feet. At the well sites proposed by this application there is approximately 28 feet of artesian head pressure above the top of the aquifer.

At the proposed well sites, there is 43 feet of available drawdown. Consequently at the wells authorized by Water Right No. 4191-3 and Water Permit No. 8201-3, there will be significantly less drawdown due to their distance from the proposed well sites, 1.1 and 2.0 miles respectively. At the well for Water Right No. 4191-3 and Water Permit No. 8201-3 there is approximately 25 feet and 64 feet of artesian head pressure, respectively. Considering the artesian head pressure at the existing appropriative wells completed into this portion of the Prairie Coteau aquifer and the distance between wells, pumping this proposed diversion is not expected to have adverse effects on other appropriative wells completed into this portion of the Prairie Coteau aquifer.

Due to the limited saturated thickness at the well sites proposed by Application No. 8254-3, drawdown created by pumping the four wells proposed by this application at the maximum combined diversion rate (1.115 cfs per well for a total of 4.46 cfs) may be self-limiting in that if pumped too hard the wells in the well field may not be able to pump as much water as desired due to overlapping drawdown cones from the other wells in the well field. The overlapping drawdown cones may reduce the artesian head pressure and possibly even the saturated thickness at the wells in the well field to a point where enough water cannot move through the aquifer to maintain the desired flowrate from each well. Maintaining the desired flow rate from each proposed well should also limit the potential impacts of pumping on nearby appropriative and domestic wells.

The Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) 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”.

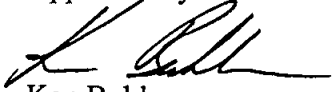
In the past, the Water Management Board has recognized to place water to maximum beneficial use, a certain amount of drawdown may occur. Since the aquifer is under confined conditions at the well site, drawdown due to pumping may extend some distance from the well sites even though it is not expected to do so. The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use of water issued for Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Water Management Board adopted Findings of Facts and Conclusions of Law that noted reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, “general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable...” (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered an adverse impact it would also be in conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to lower their pumps to accommodate for deeper water levels depending on the specific characteristics of this particular portion of the Prairie Coteau aquifer. However, when considering the statute (SDCL 46-6-6.1), rule (ARSD 74:02:04:20(7)), and the artesian head pressure, well interference from this proposed diversion is not expected to cause an adverse impact. Therefore, there is a reasonable probability that any interference created by pumping for this proposed appropriation will not be adverse.

CONCLUSIONS:

1. Application No. 8254-3 proposes to irrigate 420 acres in Day County at a maximum diversion rate of 4.46 cfs withdrawing water from a portion of the Prairie Coteau aquifer.
2. The geologic and glacial history of Day County has created a complex set of outwash deposits throughout the county including the Prairie Coteau aquifer in the area of this application.
3. Based on the observation well data, unappropriated water is available from the portion of the Prairie Coteau aquifer this application proposes to use.
4. The required recharge rates to support the estimated average annual withdrawal from this portion of the Prairie Coteau aquifer are reasonable values though they are greater than those from Hedges and others (1985).
5. There is a reasonable probability the diversion proposed by this application can be made without adversely impacting existing appropriative or domestic users.


Adam Mathiowetz, PE
SD DENR-Water Rights Program

Approved by:


Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

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

State of South Dakota
County of Day

MAR - 1 2017
SS. WATER RIGHTS
PROGRAM

I, Paula Beisch, of said county and state being duly sworn, on oath says that she is an employee of the Waubay Clipper, a weekly newspaper printed and published in Waubay of said County of Day, and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bonifide circulation of at least two hundred copies weekly; and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein mentioned; and was and is printed wholly or in part in an office maintained at said place of publication; that the notice of:

David Zubke

94 lines

a printed copy of which is attached was printed and published in said newspaper at least once each week, for 1 successive weeks on the day of each week on which said newspaper was regularly published, to wit:

Feb 25, 2017

That the full amount of the fees for the publication of the annexed notice

is \$

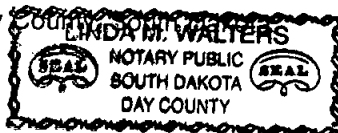
317⁸

Subscribed and sworn to, before me this 28th day of

Feb. 20 17

Linda M. Walters

Notary Public, Day



My Commission Expires: July 5, 2017

NOTICE OF
APPLICATION

NO. 8254-3

to Appropriate Water

NOTICE IS GIVEN that David Zubke, 44769 149th St, Waubay, SD. 57273 has filed an application for a water permit to appropriate 4.46 cubic feet of water per second from four wells to be completed into the Prairie Coteau Aquifer (47 feet deep) located in the S 1/2 SE 1/4 Section 23 for irrigation of 420 acres located in the W 1/2 NW 1/4, W 1/2 SW 1/4 Section 25 and E 1/2 Section 26; all in T121N-R53W within the former boundaries of the Sisseton Wahpeton Indian Reservation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8254-3 with qualifications because

- 1) unappropriated water is available;
- 2) existing rights will not be unlawfully impaired;
- 3) it is a beneficial use of water; and

Waubay Clipper

4) it is in the public interest.

The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer.

The applicant must file a petition if contesting the Chief Engineer's recommendation.

The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above.

A petition filed by either an interested person or the applicant must be filed by March 8, 2017.

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

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board.

If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application.

Notice of the hearing will be given to the applicant and any person filing a petition.

**STEVEN M. PIRNER,
SECRETARY,
DEPARTMENT OF
ENVIRONMENT AND
NATURAL RESOURCES**

(Publish February 25, 2017)

Published once at the total approximate cost of \$31.78.

RECEIVED

MAR - 1 2017

Form 8

WATER RIGHTS
PROGRAM

DEPARTMENT
OF
ENVIRONMENT
AND NATURAL
RESOURCES

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Codington) SS

I, Jackie Wettsted

certify that the attached printed Notice was taken

from the Watertown

Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was published

in the newspaper on the following date:

February 25, 2017

Cost of Printing \$ 49.48

Jackie Wettsted
(Signature)

Accounting Clerk
(Title)

2-28-17
(Date Signed)

NOTICE OF APPLICATION NO.

8254-3 to Appropriate Water

Notice is given that David Zubke, 44769 149th St, Weibay SD 57273 has filed an application for a water permit to appropriate 4.46 cubic feet of water per second from four wells to be completed into the Prairie Coteau Aquifer (47 feet deep) located in the SE 1/4 SW 1/4 and the S 1/2 SE 1/4 Section 23 for irrigation of 420 acres located in the W 1/2 NW 1/4, W 1/2 SW 1/4 Section 25 and E 1/2 Section 26; all in T121N-R53W within the former boundaries of the Sisseton Wahpeton Indian Reservation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8254-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by March 8, 2017.

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

Steven M. Pirner, Secretary,
Department of Environment and
Natural Resources. 49.48

Published once at the total
approximate cost of \$50.41.
(February 25, 2017)

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

Gronlund, Eric

From: Gronlund, Eric
Sent: Tuesday, February 21, 2017 8:13 AM
To: legals@thepublicopinion.com
Cc: Schlaak, Karen
Subject: 8254-3, David Zubke
Attachments: 8254-3public.short.docx

Please find attached a corrected version of the publication notice for a water permit application filed by David Zubke. On February 16th Karen Schlaak sent the newspaper via email the notice with instructions to publish on February 25th. An error was found in the legal description that requires this corrected version to be sent.

Mr. Zubke will be contacting the Public Opinion to authorize publication.

Thank you,

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

Gronlund, Eric

From: Gronlund, Eric
Sent: Tuesday, February 21, 2017 8:10 AM
To: 'clpjoint@abe.midco.net'
Cc: Schlaak, Karen
Subject: 8254-3, David Zubke
Attachments: 8254-3public.short.docx

Please find attached an corrected version of the publication notice for a water permit application filed by David Zubke. On February 16th Karen Schlaak sent the newspaper via email the notice with instructions to publish on February 25th. An error was found in the legal description that requires this corrected version to be sent.

Mr. Zubke will be contacted your newspaper to authorize publication.

Schlaak, Karen

From: Gronlund, Eric
Sent: Wednesday, March 01, 2017 9:30 AM
To: Schlaak, Karen
Subject: FW: 8254-3, David Zubke

From: WATE - Legals [<mailto:legals@thepublicopinion.com>]
Sent: Tuesday, February 21, 2017 9:52 AM
To: Gronlund, Eric
Cc: Schlaak, Karen
Subject: Re: 8254-3, David Zubke

Good morning, Eric,

Thank you for the updated notice. I will await notice from the applicant before scheduling publication.

Also, with regard to App No 8253-3, Makens Oak Tree LLP, I have not heard from this applicant yet and it is supposed to publish tomorrow. The deadline for tomorrow was yesterday so I thought I better let you know so you can contact them.

Thank you,
Jackie

Jackie Wettestad
Legals
Watertown Public Opinion
(605) 753-3433 (**Please Note **NEW** Phone Number)
www.thepublicopinion.com

From: "Gronlund, Eric" <Eric.Gronlund@state.sd.us>
Date: Tuesday, February 21, 2017 at 8:12 AM
To: WATE - Legals <legals@thepublicopinion.com>
Cc: "Schlaak, Karen" <Karen.Schlaak@state.sd.us>
Subject: 8254-3, David Zubke

Please find attached a corrected version of the publication notice for a water permit application filed by David Zubke. On February 16th Karen Schlaak sent the newspaper via email the notice with instructions to publish on February 25th. An error was found in the legal description that requires this corrected version to be sent.

Mr. Zubke will be contacting the Public Opinion to authorize publication.

Thank you,

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

Schlaak, Karen

From: Gronlund, Eric
Sent: Wednesday, March 01, 2017 9:31 AM
To: Schlaak, Karen
Subject: FW: 8254-3, David Zubke
Attachments: 8254-3public.short.docx

From: Gronlund, Eric
Sent: Tuesday, February 21, 2017 8:18 AM
To: Mathiowetz, Adam (DENR)
Cc: Duvall, Ron; Schlaak, Karen
Subject: 8254-3, David Zubke

The publication notice for this application included the SE ¼ SW ¼ of Section 23. Mr. Zubke called and said he does not own the quarter-quarter. The publication notice should only include the S ½ SE ¼ of Section 23. Both newspapers have been sent the corrected electronic file. Mr. Zubke when he calls to authorize publication will make sure they are using the corrected version.

Water Rights Program - File Documentation

NAME: David Zubke

ADDRESS: Waubay

DATE: 3-1-17 **COUNTY:** Day **TELEPHONE:**

RE: Publication Notice

COMMENTS:

After the public notice was sent to the Watertown Opinion and the Waubay Clipper, David Zubke called and stated he did not own the SE 1/4 SW 1/4 Section 23 and that the wells would be located in the S 1/2 SE 1/4 Section 23 only.

We re-emailed the corrected notice to the papers. The Watertown Opinion indicated receiving the corrected notice. The clipping attached to the affidavit from the Watertown Opinion had the incorrect legal description. The Waubay Clipper notice was correct.

Since the notice as published in the Watertown Opinion did include the right legal description, we determined the notice met the legal requirements. If the application is contested we will then re-publish in the Watertown Opinion.



Karen Schlaak
Water Rights Program

NOTICE OF APPLICATION NO. 8254-3 to Appropriate Water

Notice is given that David Zubke, 44769 149th St, Waubay SD 57273 has filed an application for a water permit to appropriate 4.46 cubic feet of water per second from four wells to be completed into the Prairie Coteau Aquifer (47 feet deep) located in the S 1/2 SE 1/4 Section 23 for irrigation of 420 acres located in the W 1/2 NW 1/4, W 1/2 SW 1/4 Section 25 and E 1/2 Section 26; all in T121N-R53W within the former boundaries of the Sisseton Wahpeton Indian Reservation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8254-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, February 16, 2017 10:15 AM
To: legals@thepublicopinion.com
Subject: 8254-3, David Zubke
Attachments: 8254-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on February 25, 2017.

David Zubke, 44769 149th St, Waubay SD 57273 (605 947-4114 or cell 605 265-0069) 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: Thursday, February 16, 2017 10:14 AM
To: clpjoint@abe.midco.net
Subject: 8254-3, David Zubke
Attachments: 8254-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on February 25, 2017.

David Zubke, 44769 149th St, Waubay SD 57273 (605 947-4114 or cell 605 265-0069) 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



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 16, 2017

David Zubke
44769 149th St
Waubay SD 57273

Dear Mr. Zubke:

Water Permit Application No. 8254-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Waubay Clipper printed at Waubay SD (Ph # 605-947-4501) and the Public Opinion printed at Watertown SD (Ph # 605-886-6901). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8254-3 to Appropriate Water

Notice is given that David Zubke, 44769 149th St, Waubay SD 57273 has filed an application for a water permit to appropriate 4.46 cubic feet of water per second from four wells to be completed into the Prairie Coteau Aquifer (47 feet deep) located in the SE 1/4 SW 1/4 and the S 1/2 SE 1/4 Section 23 for irrigation of 420 acres located in the W 1/2 NW 1/4, W 1/2 SW 1/4 Section 25 and E 1/2 Section 26; all in T121N-R53W within the former boundaries of the Sisseton Wahpeton Indian Reservation.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8254-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by March 8, 2017.

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

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

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

APR 26 2017

David Zubke
44769 149th St
Waubay SD 57273

Dear Mr. Zubke:

Enclosed is Water Permit No. 8254-3 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

82543



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

November 2, 2016

David Zubke
44769 149th St
Waubay, SD 57273

Dear Mr. Zubke:

As requested, pursuant to South Dakota Well Construction Standard 74:02:04:21, you are authorized to have a licensed well driller construct a test well approximately 54 feet deep prior to approval of a water permit. The test well will be located in the SE ¼ Section 23-T121N-R53W within the former boundaries of the Sisseton-Wahpeton Reservation. All test wells must be constructed in accordance with the SD Well Construction Standards. Any test holes that are abandoned must be plugged pursuant to the SD Well Construction Standards.

Authorization must be obtained before water from the well can be used. Approval of this test well does not assure issuance of a water permit. Following review of a Water Permit Application and assessing the availability of water, the potential impacts to existing users, the beneficial use, and the public interest of a permit, the Chief Engineer will make a recommendation to the Water Management Board regarding the application. The recommendation to approve, deny, or defer the application will be publicly noticed and an opportunity afforded for the public to intervene. A public hearing may be required to consider the water permit. If you have questions, call Eric Gronlund at (605) 773-3352.

Sincerely,

A handwritten signature in black ink, which appears to read "Jeanne Goodman". The signature is fluid and cursive, with the first name "Jeanne" being more prominent than the last name "Goodman".

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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8254-3

I have this day, **September 11, 2023**, made a thorough examination of the water use system constructed by **David Zubke, 44769 149th St, Waubay, SD 57273** of Permit No. **8254-3**, bearing the priority of **December 16, 2016** authorizing the diversion of **4.46** cu. ft. per second of the waters of **Prairie Coteau Aquifer** for **irrigation** purposes, in **Day** County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Wieber Well Drilling
- 2) No. of Wells 3 (all about the same)
- 3) Depth(s) 47 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 12 inches
- 2) Length 32 feet
- 3) Type Plastic

Screen:

- 1) Type PVC
- 2) Length 15 feet
- 3) Static water level 4 feet

Pump:

- 1) Make Submersible
- 2) Model Unknown
- 3) Size Unknown
- 4) Capacity 1400 total GPM

Motor:

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

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

- 1) Type Buried PVC
- 2) Size 10 inches
- 3) Length 7500 feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make 4 - Valleys
- 2) Overall length 1300 feet
- 3) Number of towers 8
- 4) End gun Y
- 5) Capacity 700 (operate 2 at a time) GPM

Chemigation Equipment:

- 1) Does chemigate N

D. Compliance with Permit Requirements:

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

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: WELL LOCATIONS
From the SE corner Sec 23 T121N R53W WELL #1: 935 ft N & 1840 ft W, Lat 45.24178 Long -97.25335
(SW SE) WELL #2: 960 ft N & 1510 ft W, Lat 45.24187 Long -97.25217 (SW SE) WELL #3: 1215 ft N
& 535 ft W, Lat 45.24258 Long -97.24837 (SE SE)
2. The works are capable of diverting and conveying to the place of use 3.12 cu. ft. per second of water of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

legal description/acreage

All land in Sec 26 T121N R53W
NW NE – 13 acres
NE NE – 33 acres
SE NE – 32 acres
SW NE – 32 acres
NW SE – 36 acres
NE SE – 36 acres
SW SE – 30 acres
SE SE – 30 acres

legal description/acreage

All land in Sec 25 T121N R53W
NW NW – 38 acres
SW NW – 35 acres
NW SW – 38 acres
SW SW – 35 acres

comprising a total of 386 acres of land and the license should be issued for 3.12 cfs.

3. All structures, wells and lands on map Y

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

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

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

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

I talked to David Zubke during the field inspection visit.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: September 21, 2023



0 0.15 0.3 0.6 0.9 1.2 Miles



Darrell DeBoer
 Water Right Inspector
 DANR-Water Rights Program



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

SEP 25 2023

8254-3

David Zubke
44769 149th St
Waubay SD 57273

Dear Mr. Zubke:

Enclosed is Water License No. 8254-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8254-3

(1) David Zubke; 44769 149th St, Waubay SD 57273, made Application No. 8254-3, December 16, 2016, for a water permit to divert 4.46 cubic feet of water per second from groundwater, four wells (Prairie Coteau Aquifer), Day County, South Dakota for irrigation purposes. Permit No. 8254-3, with a priority date of December 16, 2016, was approved March 8, 2017, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 8, 2022, and for the application to beneficial use of water on or before March 8, 2026.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 3.12 cubic feet of water per second for beneficial use. The locations of the diversion points are: *(only 3 wells were constructed)*
All diversion points are within the former boundaries of the Sisseton Wahpeton Indian reservation.

- Well #1: 935 ft N & 1,840 ft W of the SE corner of Section 23 (SW $\frac{1}{4}$ SE $\frac{1}{4}$)
(Latitude 45.24178 & Longitude -97.25335)
- Well #2: 960 ft N & 1,510 ft W of the SE corner of Section 23 (SW $\frac{1}{4}$ SE $\frac{1}{4}$)
(Latitude 45.24187 & Longitude -97.25217)
- Well #3: 1215 ft N & 535 ft W of the SE corner of Section 23 (SE $\frac{1}{4}$ SE $\frac{1}{4}$)
(Latitude 45.24258 & Longitude -97.24837)

(3) The amount of appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.

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

Section 25, T121N, R53W
(within the former boundaries of the Sisseton Wahpeton Indian Reservation)

NW $\frac{1}{4}$ NW $\frac{1}{4}$	38 acres	NW $\frac{1}{4}$ SW $\frac{1}{4}$	38 acres
SW $\frac{1}{4}$ NW $\frac{1}{4}$	35 acres	SW $\frac{1}{4}$ SW $\frac{1}{4}$	35 acres

Section 26, T121N, R53W
(within the former boundaries of the Sisseton Wahpeton Indian Reservation)

NE $\frac{1}{4}$ NE $\frac{1}{4}$	33 acres	NE $\frac{1}{4}$ SE $\frac{1}{4}$	36 acres
NW $\frac{1}{4}$ NE $\frac{1}{4}$	13 acres	NW $\frac{1}{4}$ SE $\frac{1}{4}$	36 acres
SW $\frac{1}{4}$ NE $\frac{1}{4}$	30 acres	SW $\frac{1}{4}$ SE $\frac{1}{4}$	30 acres
SE $\frac{1}{4}$ NE $\frac{1}{4}$	32 acres	SE $\frac{1}{4}$ SE $\frac{1}{4}$	30 acres

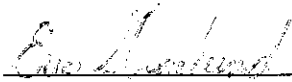
TOTAL: 386 acres

continued

(5) Pursuant to South Dakota Water Law 46-5-30.1 David Zubke, the holder and/or owner of Water Right No. 8254-3 is issued a license to appropriate water, the right to use 3.12 cubic feet of water per second from groundwater, three wells (Prairie Coteau Aquifer), with a priority date of December 16, 2016, from the locations specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8254-3 and subject to the following qualifications:

1. 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 their withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized under Water Right No. 8254-3 shall be constructed by a licensed well driller and construction of the wells and installation of the pumps shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Water Right is approved subject to the irrigation water use questionnaire being submitted each year.



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

SEP 25 2023

date

